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JOHN DEWEY'S IDEAS AND WORK IN EDUCATION AT THE UNIVERSITY OF CHICAGO.
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DESCRIPTORS- *EDUCATIONAL PHILOSOPHY, *EDUCATIONAL PSYCHOLOGY, *ELEMENTARY EDUCATION, *PROFILE EVALUATION, *EDUCATIONAL THEORIES, SURVEYS, DEWEYS' INSTRUMENTALISM, ST. LOUIS, MISSOURI

AN APPRAISAL WAS MADE OF JOHN DEWEY'S EDUCATIONAL PHILOSOPHY AND PRACTICES. THE FIRST PART PRESENTED (1) A BIOGRAPHICAL SKETCH, (2) SPECIFIC FEATURES OF HIS DESIGN FOR WORK IN EDUCATION, AND (3) THE RELATIONSHIP OF THE LABORATORY SCHOOL TO UNIVERSITY DISCIPLINES AND TO EDUCATION. THE SECOND PART PRESENTED AN ANALYSIS OF THE CURRICULUM AND METHODOLOGY OF THE LABORATORY SCHOOL AND DISCUSSIONS ON (1) OCCUPATIONS, (2) HISTORY, (3) SCIENCE, (4) COMMUNICATION AND EXPRESSION, (5) EVALUATION AND RESEARCH, AND (6) SECONDARY AND HIGHER EDUCATION. HIS SIGNIFICANCE WILL BE JUDGED BY THE STAYING POWER OF THE GENERAL PSYCHOLOGICAL AND PHILOSOPHICAL THEORY BEHIND HIS PROPOSALS FOR EDUCATION. (RS)

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JOHN DEWEY'S IDEAS AND WORK IN EDUCATION AT THE UNIVERSITY OF CHICAGO

1965: Cooperative Research Project No. S - 012

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INTRODUCTION

John Dewey has been the most controversial figure in twentieth century American education. At the turn of the century, he was a leader in the criticism of traditional schooling. More recently, educational ideas associated with him have been the target of heavy attack. He has suffered from uncritical adulation as well as unwarranted vituperation. In recent years it has been popular to identify progressive education with loose, superficial educational practice and to label Dewey as its author. There has been little effort to evaluate his contributions by a careful appraisal of his own work in education. After a period of unusually raucous commentary in the 1950's and early 1960's, the time may be ripe for a more rational appraisal of John Dewey's ideas for American education.

"Future thought in America must go beyond Dewey..., though it is difficult to see how it can avoid going through him."[1] There is probably wisdom in this recent statement by Robert J. Roth, S. J. If true, we shall need accurate knowledge of Dewey's work. The present study is based on a simple hunch: if we want insight into Dewey's actual ideas about education, we might profit from a careful reappraisal of the one period in his career when he had a direct and continuing responsibility in education. This is the decade 1894-1904 when he was at the University of Chicago as Chairman of the combined Departments of Philosophy, Psychology, and Education, and founder and director of the University Laboratory School.

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[1] Robert J. Roth, S. J., John Dewey and Self-Realization (Englewood Cliffs, New Jersey, Prentice Hall, 1962), p. 144.

The gist of the argument is that in the Chicago decade Dewey developed a comprehensive plan for the study and improvement of education. He left the University in 1904 with the total effort barely under way and his projected goals largely unrealized. His over-all design is an indispensable source for understanding his specific ideas, then or later, in their proper intent. The failure to maintain this perspective by some of Dewey's followers in the progressive education movement, as well as by his critics, has led to unfortunate misunderstandings.

The complexity of our time gives new urgency to the need to create viable educational programs. We must have access to all responsible ideas -- reasoned appraisals of our past as well as imaginative projections for the future. Without the former, we become foolish followers of fads and catchwords -- to be disappointed by each in turn as it fails to produce miraculous remedies. There is no need to have so little confidence in our educational past. American education has been rich in imaginative innovations. As we mature, we should be able to build with a sense of continuity based on judicious appraisals of our experience. The kind of shallow sloganeering which so often has characterized the debate about Dewey's role in education is unworthy of a self-respecting people.

The aim of this study is to further a realistic appraisal of Dewey's proposals by creating an account based on the sources. Liberal resort to quotations from Dewey's writings and other documents has been employed to get the record straight. In concentrating on the period when he was a practicing educator, we try to avoid a mere restatement of his educational theory by checking his ideas against the practice he sponsored in the University Elementary (or Laboratory) School in Chicago. Such an approach may help to establish points of comparison between Dewey's own work and features of the later progressive education movement. In effect, we confront the question, "What did Dewey stand for when he directed a school?"

The record shows, however, that it would be an error to concentrate exclusively on practices in his Laboratory School. Dewey makes clear that his interest in experimentation in education was an integral part of his effort to work out the ideas of his philosophy of instrumentalism. In accord with the spirit of that philosophy, he needed a setting where ideas could be tested in action. Theory and practice were to move forward in continuous interaction. The Chicago decade was the period when Dewey's break with Hegelian idealism became complete and when he and his colleagues pioneered a philosophical alternative. Because his ideas about education grew from this effort, it is impossible to understand them apart from the context of his general philosophy.

In Part I we examine the emergence of pivotal philosophical concepts that were reflected in Dewey's educational thinking. Chapter I sketches briefly some events in his personal, educational, and intellectual history and sets forth some basic theories that he was to follow in depth. In the chapters immediately following, specific features of his design for work in education are described in relation to his general philosophical and psychological speculation. Included are Dewey's vision for the place of education in relation to university disciplines and the role that the Laboratory School was to play. In Part II an analysis of the curriculum and methodology of the University of Chicago Elementary School, based on written records, is presented. An effort is made to trace the influence of the general theory into actual educational practice. Included is a statement of Dewey's goal of effecting an integrated educational program from pre-primary levels to the university and his often overlooked plans for work at the secondary level.

PART I

PHILOSOPHICAL AND PSYCHOLOGICAL THEORY

CHAPTER I

BIOGRAPHICAL BACKGROUND (1859-1894)

Why would a major figure in philosophy devote so much of his energy to education, a subject passed over lightly by most philosophers? It is clear in Dewey's case that this interest was rooted strongly in his general intellectual outlook. The exploration of the relation of his ideas on education to his general philosophy is a theme to be explored throughout this study. Dewey would be the first to admit, however, that men's lives are determined by their histories. Personal as well as intellectual factors played a role in Dewey's case. Without attempting a full-scale biographical sketch, we may be able to add understanding to our story by a brief review of Dewey's experiences in a variety of American schools prior to his Chicago tenure.

Dewey was born in 1859 and grew to manhood in Burlington, Vermont. As a boy, he failed to find in school the kinds of experiences he later was to advocate for other children. He attended traditional "district schools" in Burlington. These were overcrowded and without careful regulation of attendance. They lacked a uniform or graded course of study, and teachers were poorly selected. The 1867 report of the superintendent declared that "our public schools, as they now are, are unworthy of patronage" and "a source of grief and mortification to a large majority of our citizens."[1]

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[1] Mathew H. Buckham, Report of the Superintendent of Common Schools, City Documents (Burlington, Vermont, 1867), pp. 17-18.

The situation improved by the time Dewey entered the Burlington High School, which came to have a fine reputation for providing a quality education for general citizenship and for those planning to enter the University. English and Classical courses were offered with the latter, undoubtedly, selected by the young Dewey.

Shortly before his sixteenth birthday Dewey entered the University of Vermont. He followed the prescribed curriculum with required courses in five departments: rhetoric and English literature, languages, mathematics, natural sciences, and philosophy.

There was little intellectual excitement on campus and Dewey, as a quiet young man, played no role that distinguished him from his fellows. Even in the staid atmosphere of the University of Vermont students were not above testing regulations. Faculty meeting minutes indicate that students absented themselves from class, asked to have the final examination in a difficult course abolished, created disturbances in the dormitories, set the grass on fire, and brought beer into the college buildings on the day of the annual football game. Dewey was no rowdy, but neither was he aloof from the pattern. In 1877, he was one of nine students to receive twelve demerits for making a disturbance. The following year he earned five demerit points for concerted absence from roll-call at drill.[2]

(Buckham's italics). Quoted in George Dykhuizen, "An Early Chapter in the Life of John Dewey," Journal of the History of Ideas, Vol. 13 (October, 1952), p. 563. We are indebted to Professor Dykhuizen for his careful studies of events in the career of John Dewey.

Intellectually he was stirred by several experiences toward the end of his college career. Dewey dated the awakening of his interest in philosophical questions from the time of a course in physiology in his junior year. The text was Huxley's Elements of Physiology. Here he was introduced to the biological organism with its interdependence of parts. This gave him a sense of the possibility of a view of existence characterized by interdependence and interrelated unity. "Subconsciously at least," Dewey later wrote, "I was led to desire a world and a life that would have the same properties as had the human organism in the picture of it derived from study of Huxley's treatment."[3]

This introduction to an organic, evolutionary view, which later was to permeate his thought, was at odds with the dominant philosophical outlook on the Vermont campus. He described this as Scottish intuitionalism which was standing as the champion of traditional morals and religion against the sceptical tendencies in sensational empiricism.

> It taught that man is born with certain ultimate and unexplainable principles which are intuitively recognized as true, and which are taken for granted by common sense without any logical proof. Man is under necessity to accept them, for, lacking these self-evident intuitions, he is without starting points for his thought and without standards for his conduct. Such intuitively known principles are to be found in grammar,

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2. Dykhuizen, op. cit., p. 570.

3. John Dewey, "From Absolutism to Experimentalism," in George P. Adams and William P. Montague, eds., Contemporary American Philosophy, Vol. 2 (New York, the Macmillan Co., 1930), p. 13.

> logic, mathematics, aesthetics, ethics, religion, and metaphysics, and supply strong evidence for the existence of God, the Soul, immortality, freedom, duty, etc.[4]

This is worth noting, for Dewey came to see this intuitionalism as typical of a New England dualist heritage that he felt a need to oppose for the rest of his life. The depth of his feeling was revealed years later when he described this tradition as representing "divisions by way of isolation of self from the world, of soul from body, of nature from God" that were felt in him as "an inward laceration."[5] The demand for a unifying philosophy to resolve these separations was experienced as an intense emotional craving. A glimpse of such an alternative had been suggested first in his experience with Huxley. In the 1880's the search was to lead him to Hegel and then gradually to the elaboration of experimentalism within the evolutionary orientation.

Before embarking on what was to be a life-long venture in philosophic speculation, he was to have another kind of experience in American education as a teacher in the public schools. Upon graduating from the University of Vermont in 1879, Dewey taught in a high school for two years in South Oil City, Pennsylvania, a position he received through his cousin who was principal of the school. He taught a little of everything including Latin, algebra, and natural science. When his cousin resigned, Dewey returned to Vermont where he taught for part of the winter in the village school of Charlotte, near Burlington.[6]

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[4] Dykhuizen, op. cit., p. 565.

[5] Dewey, "From Absolutism to Experimentalism," p. 19.

While teaching in South Oil City, he continued his reading in philosophy. Upon returning to Vermont, he took tutorial work under Professor H. A. P. Torrey, who directed him to classics in the history of philosophy and the reading of German philosophers. He now came to consider the possibility of a professional career in philosophy. This decision was re-inforced by Dr. W. T. Harris, the well-known Hegelian and editor of the Journal of Speculative Philosophy, who accepted several of Dewey's first articles in philosophy.

Dewey then chose to enter Johns Hopkins which, since its founding in 1876, had become the notable American pioneer in graduate study and research. He completed work for the doctoral degree during the years 1882-1884. New intellectual worlds were opened to him of which several might be noted for our purposes.[7] He took a course in logic with Charles S. Peirce, but expressed disappointment in it because the approach was mathematical and scientific rather than what he sought: a study of the "different forms of

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6. Jane M. Dewey, "Biography of John Dewey," in Paul A. Schilpp, ed., The Philosophy of John Dewey (New York, Tudor Publishing Co., 1951), p. 13.

7. See George Dykhuizen, "John Dewey at Hopkins (1882-1884)," Journal of the History of Ideas, Vol. 22, No. 1 (January-March, 1961), pp. 103-116.

knowledge, their origins and development, their interconnection, and their comparative value as embodiments of truth."[8] This preference for a genetic rather than a mathematical, analytic approach to logic remained a part of Dewey's style.

G. Stanley Hall was another of the giants on campus. After studying under Wundt in Germany, Hall decided to make the "new psychology" his primary interest. In 1882 he established two courses in physiological and experimental psychology and another called "Psychological and Ethical Theories." He also gave a seminar in "Scientific Pedagogy" for those intending to teach. In addition to taking these three courses, Dewey conducted independent experiments in the psychological laboratory set up by Hall. Here Dewey encountered the serious effort to bring the methods of science to problems in psychology. The genetic point of view in Hall's thought that came by way of Haeckel and Spencer also entered Dewey's experience. Related to this was the idea of studying the development of children from scientific and evolutionary-organic points of view. Dewey's interest in psychological-philosophical problems is evidenced by the title of his dissertation, "The Psychology of Kant."

His greatest satisfaction came from his work with Professor George Sylvester Morris, who introduced Dewey to Hegel. Hegel's views of reality as an organic unity whose parts were interrelated like those of a biological organism met Dewey's deep need for an alternative to the dualisms he detested. As he himself put it:

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[8] *Ibid.*, p. 105.

> Hegel's synthesis of subject and object, matter and spirit, the divine and the human...operated as an immense relief, a liberation. Hegel's treatment of human culture, of institutions and the arts, involved the same dissolution of hard and fast dividing walls and had a special attraction for me.[9]

Dewey later found Hegel's schematism artificial and, as he put it, was to "drift away" from that philosophy over a fifteen year period of roughly 1885-1900. Hegel's thought, however, left permanent marks. It helped Dewey to begin the integration that he sought in his own thinking. This was evidenced, for example, in the early formings of his Social Philosophy. In independent reading he had been impressed deeply by Comte's analysis of the disorganized character of modern Western culture, due to disintegrative "individualism," and by his idea of a synthesis of science that could provide a regulative method for an organized social life. He found these same criticisms in Hegel but with a deeper, more far-reaching integration.[10] This theme was to be sounded later in Individualism Old and New and in his many writings on a democratic social order. Its influence was to be felt in his conception that the life of the school should be designed as an organic community.

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9. Dewey, "From Absolutism to Experimentalism," p. 19.

10. Ibid., p. 20.

The choice of a career in philosophy contained more than the usual risks at that time, for most departments were staffed with men trained in theology. Dewey graduated from Johns Hopkins and passed weeks at his home in Burlington with no job in sight. Finally, in July 1884, he received an offer from President James B. Angell of the University of Michigan to become an instructor at a salary of nine hundred dollars. Dewey accepted with delight. With the exception of a year at the University of Minnesota (1888-1889), Dewey spent a happy and productive ten years at Ann Arbor.

In the first period, 1884-1888, Dewey worked as a junior colleague under his friend and former mentor, George Sylvester Morris, who was Chairman of the Department of Philosophy. The orientation was Hegelian. Morris taught the courses in history of philosophy and those in ethics, aesthetics, and logic. Dewey gave the courses in psychology: empirical psychology, special topics in psychology (physiological, comparative, and morbid), psychology and philosophy with special reference to the history of philosophy in Great Britain, experimental psychology, speculative psychology, and history of psychology. In philosophy he came to teach formal logic, Greek science and philosophy, Kant's Critique of Pure Reason, the philosophy of Herbert Spencer, and seminars in Plato's Republic and in Kant's ethics.[11]

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[11] George Dykhuizen, "John Dewey and the University of Michigan," Journal of the History of Ideas, Vol. 23, No. 4 (October-December, 1962), pp. 513-514.

Professor Dykhuizen has provided a detailed account of Dewey's work and experiences at Ann Arbor.[12] Several items may be noted for purposes of the present study.

The Hegelianism of Morris and Dewey was taught as compatible with traditional Christian concepts, and the religious atmosphere of the Department satisfied all but the very orthodox. Morris took the lead with a position that was pietistic rather than dogmatic, but Dewey also affirmed that Hegelian philosophy "in its broad and essential features, is identical with the theological teaching of Christianity."[13] In his early years, Dewey devoted considerable energy to the Student Christian Association for which he conducted a Bible class on "The Life of Christ -- with special reference to its importance as an historical event" and gave addresses on such topics as "The Obligation of Knowledge of God," "Faith and Doubt," and "The Place of Religious Emotion." He was active in the First Congregational Church where he conducted Bible classes from 1887 to 1888 in "Church History."[14] Later his ethical interests shifted from a religious to a social orientation. But his concern with the ethical dimension was constant throughout his entire career.

A number of publications grew out of the courses he was teaching in psychology, including his book, Psychology (1887). In it he sought to combine in a single system the

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[12] Ibid.

[13] Ibid., p. 517.

[14] Ibid., pp. 520-521.

the results of the new empirical physiological psychology and the concepts of Hegelian idealism. It was widely adopted as a text by many universities, but it was criticized for confusions introduced in its metaphysical sections by both G. Stanley Hall and William James.[15] Dewey himself later repudiated it.

It was during the latter part of his stay at Michigan that Dewey began to move away from Hegelianism. The growing dominance of functionally oriented psychology and evolutionary biology was a leading factor in the shift. James's Principles of Psychology exerted a critical influence in leading Dewey to assign major significance to the idea of a total organism interacting with its environment and actively engaged in adjusting to it. James thought of life in terms of action. He conceived of mind not as something apart from nature, but as the process by which organisms and environment become integrated. This objective conception of mind, Dewey said, "worked its way more and more into all my ideas and acted as a ferment to transform old beliefs."[16]

It was during the Michigan years that Dewey's interest in primary and secondary education began. The University of Michigan was an integral part of the public school system. Prior to 1871 the University admitted only those who could pass a formal academic examination. In 1871, however, the decision was made to admit any secondary school graduate of a school which met academic requirements of the University. Faculty committees were sent to such high schools to see if the quality of instruction warranted admission to the University without examination. Dewey was one of these investigators. He soon saw the need of an organization to study problems of mutual interest to high schools and colleges. He became active in the Michigan Schoolmasters Club and served as vice-president in 1887 and 1888. He became aware that the quality of the secondary school was dependent on the training the child had received in the grade schools. This led him to study programs of the elementary schools. He became convinced that work there did not coincide with the normal learning processes of young children. He came to attribute the shortcomings of the schools to ill-conceived programs and methods and to poor coordination of the various levels. Thus, he began his search for an alternative that would integrate educational, psychological, and philosophical ideas. Within a few years the quest was to culminate in his founding of the Laboratory School of the University of Chicago.17

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[15] Ibid., 525-526.

[16] Dewey, "From Absolutism to Experimentalism," p. 24.

The Michigan phase should not be left without mention of a factor important in Dewey's personal life that also contributed to his turning to education. In 1886 he was

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17. The formal title of the school was the University Elementary School. It became known informally as the Dewey School. Ella Flagg Young, a member of Dewey's staff, suggested the term, the Laboratory School. Since it was intended to serve as an educational laboratory, we shall generally refer to it as the Laboratory School.

married to Alice Chipman, a young woman who had a deep interest in philosophy. She was a charter member of the Philosophical Society and took most of the work offered by the Department. Her vigorous, independent mind and her strong interest in social issues were to act as an intellectual stimulant to her husband's thought. Two of their six children were born during their stay in Ann Arbor while a third was born in Minneapolis. Both parents were concerned that their children receive richer educational experiences than those available in the routine classrooms of their day. Their children eventually became students in the Chicago Laboratory School. When Dewey was once asked what led him to turn to educational philosophy and the founding and directing of the School, he replied, "It was mainly on account of the children."[18]

In the meantime, President William Rainey Harper was assembling a brilliant faculty at the newly founded University of Chicago. He was looking for a man to head the Department of Philosophy. James H. Tufts, a former colleague of Dewey's at Michigan and now on the Chicago staff, recommended Dewey. Dewey, at 29, had been appointed to the chair of Professor of Philosophy at Michigan upon the death of Morris. The exciting quality of the faculty at Chicago and the chance to associate with men engaged in advanced research appealed to him. Another attraction was the definition of the job which made the Chairman head of the combined Departments of Philosophy,

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[18] Katherine C. Mayhew and Anna C. Edwards, The Dewey School (New York, D. Appleton-Century Co., 1936), p. 446.

Psychology, and Pedagogy. By this time Dewey felt a growing need to see pedagogy given a solid grounding in psychology and philosophy. George Mead later affirmed that the inclusion of pedagogy was an important factor in Dewey's decision to accept the offer.[19]

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[19] George H. Mead, The Philosophies of Royce, James and Dewey in their American Setting (Cambridge, Harvard University Press, 1930), p. 101.

CHAPTER II

THE PHILOSOPHICAL ORIENTATION

A full accounting of Dewey's work in education would require the details of a complete biography and the context of the entire range of his thought. Neither is possible within the limits of this study. Since, however, an understanding of his educational ideas is unintelligible apart from them, we cannot avoid the attempt to point out some of the themes which seem especially relevant.

We turn from the biographical sketch to aspects of the intellectual rationale in which his educational thought was rooted. A point from Dewey's own reminiscences about his career may serve as a transition. In a comment on his earliest philosophical articles, written before his enrollment at Johns Hopkins, Dewey noted with some humor that they were highly schematic and formal in character, due, he said, to the fact that he had not as yet encountered subject matter that corresponded to his deeper interests. Then he observes:

> I imagine that my development has been controlled largely by a struggle between a native inclination toward the schematic and formally logical, and those incidents of personal experience that compelled me to take account of actual material. Probably there is in the consciously articulated ideas of every thinker an over-weighting of just those things that are contrary to his intrinsic bent, and which, therefore, he has to struggle to bring to expression, while the native bent, on the other hand, can take care of itself. Anyway, a case might be made out for the proposition that the emphasis upon the concrete, empirical, and "practical" in my later writings is partly due to considerations of this nature. It was a reaction against what was more

> natural, and it served as a protest and protection against something in myself which, in the pressure of the weight of actual experiences, I knew to be a weakness....The marks, the stigmata, of the struggle to weld together the characteristics of a formal, theoretic interest and the material of a maturing experience of contacts with realities showed themselves, naturally, in style of writing and manner of presentation. During the time when the schematic interest predominated, writing was comparatively easy; there were even compliments on the clearness of my style. Since then thinking and writing have been hard work. It is easy to give way to the dialectic development of a theme; the pressure of concrete experience was, however, sufficiently heavy, so that a sense of intellectual honesty prevented a surrender to that course. But, on the other hand, the formal interest persisted, so that there was an inner demand for an intellectual technique that would be consistent and yet capable of flexible adaptation to the concrete diversity of experienced things. It is hardly necessary to say that I have not been among those to whom the union of abilities of these two opposed requirements, the formal and the material, came easily. For that very reason I have been acutely aware, too much so, doubtless, of a tendency of other thinkers and writers to achieve a specious lucidity and simplicity by the mere process of ignoring considerations which a greater respect for concrete materials of experience would have forced upon them.[1]

This passage is quoted at length because it deals with a theme central to the interpretation to follow. It reveals that embedded in the basic conviction and style of the man was the hunch that the reach for truth must be anchored in an interplay of theory with events in the thick stream of experience. The use of "stigmata" indicates the personal depth of the issue and the effort. The marks of this struggle are embedded deeply in the whole thrust of his philosophic thought and in the design for education that grew from it.

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[1] Dewey, "From Absolutism to Experimentalism," in Adams and Montague, eds., op. cit., pp. 16-17.

We turn first to the philosophic frame of reference to test the idea.

> Nothing but the best, the richest and fullest experience possible, is good enough for man. The attainment of such an experience is not to be conceived as the specific problem of 'reformers' but as the common purpose of men.[2]

This statement, as well as any, identifies the point of the compass by which Dewey directed the whole of his labors. It contains his definition of the paramount vocation of men. Intellectuals and educators had a special responsibility: to seek clarity about the nature of man's condition and to define and sharpen the tools for getting on with the task of human fulfillment. In the many facets of his work of a lifetime -- in logic, social philosophy, ethics, aesthetics, and education -- he set out to do his part. It was no small effort for one man and became a major contribution to world philosophy.

Dewey distinguished his point of view from most philosophic systems by his acceptance of the universe as marked by contingency as well as by order; by a dynamic process of development through the interaction of events. Man, in body, mind, self, and social life is in and of this natural process. Nature is in the process of becoming. Experience, which in its broadest sense includes the totality of man's interaction with the universe, shares in the process. In the evolutionary scheme, experience becomes more complex, opening up new life possibilities. Man, with his special capacity for understanding and for giving direction to events, occupies a place on the front edge of the ongoing process. As Julian Huxley later put it, "In man, evolution has at last become conscious of itself."[3]

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[2] John Dewey, Experience and Nature (New York, W. W. Norton and Co., Inc., 1929), p. 412.

Contrary to those who charge Dewey with unwarranted optimism, he argued that the possibilities for enrichment of experience were before us, but there are no guarantees they will be realized. With the emergence of the capacity for thinking, man is freed from the need of mere biological adjustment. The world changes as man walks and acts in it. From the beginning, the universe contains dimensions of contingency and accident which can bring tragedy. The introduction of thought frees man for a unique kind of development, but the products of thought introduce, too, new hazards. Some feeling of this point may be conveyed by a passage from Experience and Nature:

> The more an organism learns....the more it has to learn, in order to keep itself going; otherwise death and catastrophe. If mind is a further process in life, a further process of registration, conservation and use of what is conserved, then it must have the traits it does empirically have: being a moving stream, a constant change which nevertheless has axis and direction, linkages and associations as well as initiations, hesitations and conclusions.[4]

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[3] Julian Huxley, "Introduction to Pierre Teilhard de Chardin," from Pierre Teilhard de Chardin, The Phenomenon of Man (New York, Harper and Brothers, 1959), p. 20.

[4] Dewey, Experience and Nature, pp. 281-282.

Men might end by incinerating themselves or by generating new levels of savagery and brutality in ugly, over-crowded centers of dissonance and conflict. Experience, however, is not inevitably destined so to evolve. There will forever be new problems that demand confrontation, but there will also be new opportunities to enrich life experience. If men move in the latter direction, it will be because they deepen their understanding of their condition and muster the will, the habits of mind, the courage to preserve the tested goods, and to create indispensable innovations.

Civilization is the critical part of the evolutionary process for man. Dewey saw civilization as a junction of a stubborn past and an insistent, on-coming future. When philosophy remains alive it does so by playing a critical role in the advance of civilized experience. Its proper role is criticism: criticism of outworn, encrusted beliefs and attitudes that blind and hobble men; but criticism, too, in the positive sense of clarifying ends and values to which men may aspire in terms of the reality they confront.

Dewey maintained that philosophic thought becomes sterile when it is preoccupied with its own abstractions and cherished, esoteric questions. The threat to its vitality is the tendency to become enamored with the "schematic and formally logical" which Dewey so strongly felt had to be resisted in his own development. Intellectual work has a major obligation to move toward refined generalizations, but this effort can become a trap and a move toward irresponsible isolation unless these are checked against concrete events. Reality is always complex. No set of abstractions can account for it completely.

In characteristic fashion, Dewey argued for the necessity of abstraction and experience in fruitful interaction rather than a duality of abstraction versus experience. His writings are full of criticisms of philosophical traditions which violate this injunction: classical Western traditions that split man into mind and matter and elevate the former into the instrument for winning eternal truths from the realm of pure idea; empiricist, materialist traditions that reduce men to automata, shaped by the push of stimuli and sensations. Dewey's own words may underscore the emphasis he attached to this point:

> There are two avenues of approach to the goal of philosophy. We may begin with experience in gross, experience in its crude forms, and by means of its distinguishing features and its distinctive trends, note something of the constitution of the world which generates and maintains it. Or, we may begin with refined selective products, the most authentic statements of commended methods of science, and work back from them to the primary facts of life. The two methods differ in starting point and direction, but not in objective or eventual content. Those who start with coarse, everyday experience must bear in mind the findings of the most competent knowledge, and those who start from the latter must somehow journey back to the homely facts of daily existence.[5]

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[5] John Dewey, Experience and Nature, 1925 ed., p. 2.

One more statement, vivid in phraseology, reveals Dewey's commitment to the idea:

> Now the notion of experience, however devoid of differential subject-matter -- since it includes all subject-matters --, at least tells us that we must not start with arbitrarily selected simples, and from them deduce the complex and varied, assigning what cannot be thus deduced to an inferior realm of being. It warns us that the tangled and complex is what we primarily find; that we work from and within it to discriminate, reduce, analyze; and that we must keep track of these activities, pointing to them, as well as to the things upon which they are exercised, and to their refined conclusions. When we contemplate their fruits we are not to ignore the art by which they are produced. There is a place for polishers of stones and for those who put the stones together to make temples and palaces. But "experience" reminds us that a stone was once part of some stratum of the earth, and that a quarryman pried it loose and another workman blew the massive rock to smaller pieces, before it could be smooth-hewn and fitted into an ordered and regular structure. Empirical method warns us that systems which set out from things said to be ultimate and simple have always worked with loaded dice; their premises have been framed to yield desired conclusions.[6]

Dewey's hunch that he needed a point of view that would keep ideas in touch with the world led gradually to his disenchantment with the nebulous abstractions of Hegelian idealism. This trend quickened sharply in the years immediately preceding his departure from Ann Arbor for Chicago. In 1894, he was referring to his point of view as "experimental idealism."[7] This turn was given a strong push by the increasing dominance in his thinking of evolutionary biology and functional psychology. As we have seen, James's Psychology, which he was using as a text in the early 1890's, forced on him the idea of an organism actively engaged in seeking an adjustment to an environment. Accompanying this was the revolutionary idea of mind as an emergent function of organism-environment interaction. This brought mind down from the lofty realm of Hegel's Absolute Spirit.

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[6] Ibid., pp. 13-14.

[7] George Dykhuizen, "John Dewey and the University of Michigan," Journal of the History of Ideas, Vol. 23, No. 4 (October-December, 1962), p. 539.

At this time Dewey was being stimulated by his colleagues George H. Mead and Alfred Henry Lloyd whose work in psychology was moving rapidly in a similar direction. In Mead's courses in psychology and in his course "The Philosophy of Evolution," he was seeking to determine the bearings of evolution for scientific psychology. In concentrating on seeing mental processes as functions of the interaction of a total organism to a total environment, he was laying the groundwork for the social component of mind that he clarified later. Lloyd, too, worked with the interactionist concept and declared that, "Ideas are plans, and consciousness is always a planning."[8] In a 1903 letter to William James in which Dewey explained the emergence of the pragmatic point of view at the University of Chicago, Dewey wrote, "As for the standpoint, we have all been at work at it for about twelve years. Lloyd and Mead were both at it in Ann Arbor ten years ago."[9] Thus, Dewey and his colleagues shared the exciting task of creating a theory of the functional role of thought. Closely related was their concern with the problem of how to employ effective thinking to the end of enriching human experience.

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[8] Ibid., p. 536.

[9] Ibid.

At the same time, Dewey saw a new urgency for philosophical reform. Science which was so full of promise was also the source of disruptions. One of these was the creation of a technological-urban social order with novel complexities of tempo and texture. Old community forms were disappearing and viable alternatives were not in sight. Dewey later described the last two decades of the nineteenth century as a turning point in American history. These decades marked the close of the pioneer period. The aftermath of the Civil War led the United States into an industrialized and commercial age. As early as 1888 in The Ethics of Democracy,[10] Dewey was describing the stakes at issue for a free society. Years later in Individualism: Old and New, he stated the crucial question with powerful directness: "Can a material, industrial civilization be converted into a distinctive agency for liberating the minds and refining the emotions of all who take part in it?"[11]

In Chicago, Dewey encountered the raw realities of a burgeoning megalopolis. His associations with Jane Addams deepened his awareness of the miseries of the exploited.[12]

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10. John Dewey, The Ethics of Democracy, University of Michigan Philosophical Papers, Second Ser., No. 1, 1888.

11. John Dewey, Individualism: Old and New (New York, G. P. Putnam's Sons, 1930), p. 124.

12. See, for example, the letter of John Dewey to Jane Addams

The corruption of municipal politics and the political apathy of the impoverished masses sharpened his sense of threats to free institutions. The new urbanism could increase human tribulation and manipulation as compared with the restricted but more humane community life Dewey had known in New England. Miss Addams's idealism and democratic faith whetted his interest in social problems. The special task was to formulate the conditions necessary to make democratic ideals function in huge, amorphous industrial settings. Intellectual and spiritual crises, as well as social disorders, were spawned by the advent of science, and men needed help.

> Modern science, modern industry and politics, have presented us with an immense amount of material foreign to, often inconsistent with the most prized intellectual and moral heritage of the western world. This is the cause of our modern intellectual perplexities and confusions. It sets the especial problem for philosophy today and for many years to come.[13]

Evolutionary theory was the great source of intellectual ferment at the time. It exemplified the insights about men and the universe that scientific inquiry was producing. In its broad scope, it encompassed more than innovations in biology. Geology and astronomy were advancing within an evolutionary framework, and it was exerting a profound influence on the newer sciences of sociology, anthropology, and psychology. It was one source of the excitement on the

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in the Swarthmore College Library, Peace Collection (January, 1896). It was written in regard to her paper concerning the Pullman Strike.

Chicago campus as the vigorous thinkers that Harper assembled saw the need to ask new questions and create novel intellectual formulations.

Dewey was to embrace the evolutionary point of view and assign it a pivotal place in his thought, because reality demanded it. At the same time, he was much aware of its disturbing effects as the disjunctions between pre-scientific and scientific traditions became more acute. He felt that a primary task of intellectuals was to help effect a new integration, consistent with the findings of science, but in a way that would enable man to live with a sense of purpose and commitment to the human adventure. In retrospect, in 1939, Dewey stated that this had been one of the persistent problems in his philosophical inquiry:

> The problem of restoring integration and cooperation between man's beliefs about the world in which he lives and his beliefs about values and purposes that should direct his conduct....Philosophy's central problem is the relation that exists between the beliefs about the nature of things due to natural science to beliefs about values....The other main problem....is the problem of the relation of physical science to the things of ordinary experience.[14]

Dewey insisted that philosophers and intellectuals have a special responsibility when civilization is in a time of revolutionary change. Philosophy is to comprehend and articulate the critical elements in the emergence of

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13. John Dewey, Experience and Nature (New York, W. W. Norton and Co., Inc., 1929), p. ii.

14. John Dewey, "The Philosopher Replies: Experience, Knowledge and Value: a Rejoinder," in Paul A. Schilpp, ed., The Philosophy of John Dewey (New York, Tudor Publishing Co., 1951), p. 523.

civilized experience; and beyond that, to make imaginative projections for the future. It is to clarify factors in man's condition that help or hinder the possibility of his growth. It must refer its conclusions back into experience.

Dewey made dogged and imaginative efforts to work in this way in all aspects of his thought. It was in the stimulating atmosphere of the Chicago campus that his instrumentalism blossomed and took shape. Intellect was to be put to work. Foremost was the need to understand the nature of thought itself. Scientific investigation was giving new insights about the nature of thinking. Dewey's logic and psychology came together to explain the natural evolution of effective thought, the conditions that give rise to it, the possibilities for refining and extending its application, and the hindrances that block resort to it. His conception of reflective thinking was rooted in a biological model and the methods of scientific inquiry. The primary idea was William James's notion of living things falling out of adjustment with their world and needing to restore equilibrium. In thinking, the counterpart was the encounter with troublesome, problematic situations which needed resolution before advances could be made.

In social philosophy, he argued that institutions had to be understood genetically with reference to critical factors of adjustment that led to change. Their functioning had to be judged in terms of their results in enriching or demeaning lives caught up in them.

Moral and ethical theory was to be rescued from the uttering of soothing but ineffectual truisms. Emphasis, instead, was to be placed on analyzing concrete conditions needed to realize moral goods.

Aesthetics was to be brought out of the museums and the private collections of a cultured elite. The aesthetic was envisaged as the consummatory quality of heightened experience that could be present in every day living, in the expressive work of children, in the form of cities, or in sophisticated abstract thought as well as on canvasses in marble buildings.

Finally there was education. Dewey's central conviction, that theory and abstract thought must interact with the world of nature and the problems of men, provided the key to understanding the attention he gave to education -- a feature of his work that professional philosophers found difficult to take seriously. He once observed that for many years Democracy and Education was the one book in which his philosophy was most fully expounded -- and then wryly remarked that his critics in philosophy refused to read it.[15] If philosophy was to provide the insights to help men find their way, educating the young, in accord with needed attitudes and understanding, was as critical a social task as any. In Dewey's view, educational problems were to act as a testing ground in which philosophical ideas had to prove themselves.

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[15] Dewey, "From Absolutism to Experimentalism," pp. 22-23.

The demands to think through the concrete consequences of his philosophy for educational practice worked as a factor in integrating his thought. In the 1930 essay in which Dewey reflected on aspects of his intellectual development, the first point he referred to was the importance that the practice and theory of education had for him. "This interest fused with and brought together what might otherwise have been separate interests -- that in psychology and that in social institutions and social life." He came to believe, he said, that philosophizing about education was the supreme human interest in which "other problems, cosmological, moral, logical, come to a head."[16] He added that his special interest was in the education of the young, "for I have never been able to feel much optimism regarding the possibilities of 'higher education' when it is built upon warped and weak foundations."[17]

He concluded with the comment that this appraisal of the pivotal role of education in his thought is a "handle offered to any subsequent critic who may wish to lay hold of it."[18] This invitation provides the occasion to turn to Dewey's work as educator at the University of Chicago.

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[16] Ibid.

[17] Ibid.

[18] Ibid.

CHAPTER III

DEWEY'S PLAN FOR WORK IN EDUCATION

The opening sentence of Dewey's first lecture in pedagogy in 1896 reads as follows:

> The philosophy of education has the problem of discovering what the value of education is in human experience, of discovering, that is to say, the place which it occupies in the larger whole of life.[1]

In his fourth lecture of that year, he added:

> Education consists either in the ability to use one's powers in a social direction, or else in ability to share in the experiences of others and thus widen the individual consciousness to that of the race.[2]

Dewey's plan for work in education received its character from a broad over-arching directive: to conserve, transmit, and advance civilization in such a way as to make it a functioning part of individual, responsible selves. One can defend the idea that his concern with civilized experience, the nature of its evolution and its role in the fulfillment of individuals, provided the unifying theme that gave direction to his various proposals for education.

He stressed, time after time, the joint responsibility of intellectuals in philosophy, scholarship, and edcation. Civilization is a process of growth in human experience. Philosophy's task is to work out the conditions which lead to human fulfillment within the conditions emerging in the specific civilization in question. Philosophy is to comprehend and articulate the course that experience has taken; beyond that it is to make imaginative projections for the future.[3] It needs intellectual co-partners. On the one hand, it must keep abreast of advances in knolwedge coming from research in anthropology, social institutions, industry, science, literature, and history of religion in order to keep in contact with man's real situation. On the other hand, work in psychology and education is required to assure that knowledge will function fruitfully in men's lives.

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[1] John Dewey, Lectures for the First Course in Pedagogy. Unpublished, No. I, 1896, p. 1. Copy made available to the author by Professor (emeritus) Frederick Eby, University of Texas.

[2] Ibid., Lecture No. 4, p. 1.

In Democracy and Education, Dewey affirmed that it was impossible for philosophy

> to have any success in these tasks without educational equivalents as to what to do and what not to do....By the educative arts philosophy may generate methods of utilizing the energies of human beings in accord with serious and thoughtful conceptions of life. Education is the laboratory in which philosophic distinctions become concrete and are tested.[4]

Contrary to a popular stereotype that Dewey wanted to indulge children, it is clear that his goal was to create a reformed and vital liberal education, appropriate for a democratic society. He once said:

> The more one appreciates the intrinsic esthetic, immediate value of thought and science, the more one takes into account what intelligence adds to the joy and dignity of life, the more one should feel grieved at a situation in which the exercise and joy of reason are limited to

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3. See, for example, John Dewey, Democracy and Education (New York, The Macmillan Co., 1916), p. 378.

4. Ibid., p. 384.

> a narrow, closed and technical social group and the more we should ask how it is possible to make all men participators in this inestimable wealth.[5]

The kind of person who should emerge from a truly liberalized education would be one prepared to learn throughout his life; capable of acting in his natural and social world effectively and with a sense of obligation to human society -- past, present, and future. His criticisms of educational practice grew from the conviction that the schools of his time were not seriously concerned with such goals.

Dewey pinpointed some of the shortcomings in a famous chapter on "Waste in Education" in School and Society.[6] He charged the schools with being wasteful in that they failed to make any significant difference in the lives of their students or their communities. The waste was due to an isolation of aspects that ought to be integrated. There was the isolation of activities of the classroom from the out-of-school activities of the child; there was the bits-and-pieces approach of presenting object lessons or ill-coordinated, self-contained lesson plans under the illusion that the child's mind could be shaped by "scientific" insertions. There was the isolation of one set of studies from another and a lack of unified connections of lower, middle, and higher parts of the system. Dewey pictured the system as a patchwork in which the different levels represented borrowing from various centuries and traditions: for example, the universities were from the medieval scholastic tradition, the kindergarten from romantic, moralistic philosophies of the eighteenth century, and the primary school was a response to practical needs to teach reading when printing was invented. Since coordination had never been effected, the whole system suffered from discontinuities.

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[5] John Dewey, Philosophy and Civilization (New York, Minton, Balch and Co., 1931), p. 35.

[6] John Dewey, The School and Society, Revised ed. (Chicago, University of Chicago Press, 1923), Ch. 3.

In addition, school approaches were based on false pre-scientific psychologies of learning that led to rote and ineffective learning.

Related to these criticisms was the charge that the content of studies was not only irrelevant and disjointed but thin and out of touch with the well-springs of scholarship.

> There is much of utter triviality of subject matter in elementary and secondary education. When we investigate it, we find that it is full of facts taught that are not facts, which have to be unlearned later on. Now, this happens because the "lower" parts of our system are not in vital connection with the "higher." The university or college, in its ideal, is a place of research, where investigation is going on; a place of libraries and museums, where the best resources of the past are gathered, maintained, and organized. It is, however, as true in the school as in the university that the spirit of inquiry can be got only through and with the attitude of inquiry. The pupil must learn what has meaning, what enlarges his horizon instead of mere trivialities. He must become acquainted with truths, instead of things that were regarded as such fifty years ago or that are taken as interesting by the misunderstanding of a partially educated teacher. It is difficult to see how these ends can be reached except as the most advanced part of the educational system is in complete interaction with the most rudimentary.[7]

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[7] Ibid., pp. 70-71.

The result, from Dewey's point of view, was a pitiable waste of human life. He was angry about it. His bill of particulars helps to explain the specific features of the program he did advocate. He treated his denunciation of the status quo as a personal challenge to create an alternative.

In the years since, sharp criticisms have been directed against the "new education" launched by reformers like Dewey and Colonel Parker. It sometimes has been overlooked how many of their proposals have been absorbed and are now taken for granted. It is difficult to measure the revolution the reformers wrought in thought and practice without reference to the school situation they fought to change. Where education is concerned, the habit has been to describe schools in white or black according to one's preferences. The reformers shared this tendency. Their pictures of traditional schools undoubtedly were overdrawn and they ignored the fine teaching which did exist. On the other hand, those who yearn nostalgically for the educational virtues of the good old days when grandfather went to school are deluding themselves.

There is a report of American education in the 1890's by Joseph Mayer Rice, The Public-School System of the United States,[8] which helps explain the zeal and dedication of the reformers. Dr. Rice was a physician with an interest in pediatrics which led him to study European schools, particularly in Germany. What he found about teachers, normal school preparation, and the quality of educational theory and research in the universities awoke him to the backwardness of American education. His brother was editor of the journal The Forum. He invited Joseph to write a series of articles on American schools based on extended observations. Rice had a scientific temper and training and spent over five months observing twelve hundred classrooms in major schools in the East and Midwest. He supplemented these by attending teachers' meetings and sessions of boards of education. Rice concentrated on city systems and he tried to see at least twenty-five to thirty-five teachers in each in order to obtain a fair sampling. His reports were first issued in a series of articles in The Forum and then published as a book in 1893. One does not have to accept his findings as the definitive statement of the condition of American schools, but the care and energy devoted to the preparation of these reports by a well trained mind gives one confidence that there is truth in them. It is not a pretty picture.

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[8] Joseph Mayer Rice, The Public-School System of the United States (New York, The Century Co., 1893).

He expressed shock at the poor preparation of teachers, many of whom lacked even normal school training. Often they were intimidated by high-handed methods of school officials who had received their positions as political hand-outs. The low quality of educational thinking

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represented in school boards depressed him. Compared to Germany, there was a relative lack of effort to build educational theory on the basis of research and relevant findings from sciences related to education. He found instances of good practice, but all too often classrooms were conducted in the manner he described as typical in New York City.

In New York he chose to visit schools and teachers that had been rated high by their supervisors. Typical preparation consisted of arranging long lists of questions with fixed answers. The goal was to set forth in concise form most of the facts prescribed in the course of study. The assumption was that children knew nothing as they came to class and had to be taught specifics by the teacher.

> The instruction throughout the school consists principally in grinding these answers verbatim into the minds of the children. To reach the desired end, the school has been converted into the most dehumanizing institution that I have ever laid eyes upon, each child being treated as if he possessed a memory and the faculty of speech, but no individuality, no sensibilities, no soul.[9]

A chief maxim was "Save the minutes." The method was to see how the greatest number of answers could be given in the smallest number of minutes. Techniques to expedite the goal were developed. A student was taught to pop up and say quickly and loudly, "A note is a sign representing to the eye the length or duration of time." As he was sitting down, the next child arose for a similar performance.

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[9] *Ibid.*, p. 31.

Variations on the theme were developed to coincide with "modern methods" of sense training. Children, for example, were given little flags with geometrical forms in different colors on them. This led to: "A square; a square has four sides and four corners; green." (Down). "A triangle; a triangle has three sides and three points; red" (Down), etc.[10] In such schools even the teachers who had received preparation which gave them some insight into the needs and behavior of children were reduced to the level of those without training.

Rice included in his itinerary visits to Chicago schools. He was observing them shortly before Dewey's arrival to the city. He found a few excellent schools which, he said, were exceptions. In the main, he found Chicago schools not in advance of those in New York and Philadelphia. "Indeed the schools of that city may be justly regarded as the least progressive of the three."[11]

With conditions like this and with the kinds of values and philosophical interests Dewey had developed by 1894, it is not surprising that he welcomed President Harper's invitation to become Chairman of the combined Departments of Philosophy, Psychology, and Pedagogy. It gave him an unparalleled opportunity to put his ideas into action. A major opportunity to make education a subject of detailed study was now being provided.

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[10] Ibid., p. 38.

[11] Ibid., p. 166.

Dewey needed to create a program adequate for the size of the problem as he defined it. It included:

(1) A plan to create education into a disciplined area of inquiry. The university, through this new discipline, working in continuing cooperation with other academic departments, was to provide leadership, through research and development, for the whole system of American schools from the kindergarten through higher education.

(2) A decision to found a laboratory school where research would be conducted and where a liberal education would be developed that would function in character and behavior. Eventually it was to embrace all levels and was to be characterized by unity and coherence in curriculum and methodology.

(3) A conceptual frame-of-reference, derived from the intellectual work of Dewey and his collaborators, to give direction to the total effort.

The three parts of the plan were organically related. They provide the frame of reference for understanding Dewey's ideas about education.

CHAPTER IV

UNIVERSITY RESEARCH AND EDUCATION

In the last decades of the nineteenth century, the emergence of a complex industrial society and a mushrooming public school system created a demand for more highly trained teachers. Large numbers were needed in a hurry. One response was the rapid expansion of normal schools and teacher training programs. This was accompanied by a quickened interest in the theory and practice of education. Dewey's personal experiences and his mode of philosophizing had led him to be deeply concerned with problems in education.

President Harper of Chicago shared with Dewey an interest in coming to terms with the problems that related the lower schools with higher education.[1] Dewey's proposals for a fresh approach won ready support from Harper.

The general thrust of Dewey's proposal was that the institution of education and the process of learning should become major areas of inquiry within the university; that the scholarly research and facilities of the campus should be brought to bear on the problems of education.

In the present chapter we propose to examine: (1) Dewey's case for including education as a university discipline and (2) his proposals and efforts to use an interdisciplinary approach in the study of education.

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1. See William R. Harper, "Ideals of Educational Work," Journal of the Proceedings and Addresses of the National Education Association, 1895, pp. 987-998. Professor Frederick Eby, who was a graduate student in education and a member of the staff of the Laboratory School for a time, emphasized this point in an interview with the author.

A. Education as a Subject of University Inquiry

Dewey set forth, in four articles, his ideas on the proposition that education should be a matter of university inquiry. He explained the reasons for such a proposal and recommended an outline for the work. The first two articles are closely related in title and content: a two part article, "Pedagogy as a University Discipline,"[2] appeared in 1896, the year in which the Laboratory School was founded, while "Education as a University Study,"[3] was published in 1907, just three years after Dewey had left Chicago and had had a chance to reflect on his experience. The latter essay amplifies some ideas touched on earlier but contains the same themes expressed in 1896.

He argued for a division of labor in the science and art of education. There was a need, he said, for one set of schools to prepare the great army of teachers for the insatiable demands of the expanding public schools. These training schools were to put to use tested knowledge and practice. Programs parallel to these were to be directed toward the leaders of American education -- teachers of the normal schools, professors of pedagogy, school administrators, and educational innovators. Such offerings should be made available at the graduate level. Dewey, it turned out, was describing his own plan for the Department of Pedagogy at Chicago.

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[2] John Dewey, "Pedagogy as a University Discipline," University Record, Vol. 1, Nos. 25, 26 (September, 1896), pp. 353-355, 361-363.

[3] John Dewey, "Education as a University Study," Columbia University Quarterly, Vol. 9, No. 3 (June, 1907), pp. 284-290.

The need stemmed from the near absence of opportunities for graduate study of education in American universities. Dewey described the kind of students whom he hoped would be attracted as those who had completed college study of high quality and who had served apprenticeships in the schools. They probably would be repelled by the routine content of the normal schools; if they wanted to pursue investigation of further problems in education, almost their only recourse was to enroll in German universities.

It is likely, Dewey said, that such leaders would be persons who were discontented with the shortcomings of the status quo. They would be seeking new ideas, new perspectives. But, at the same time, they needed an opportunity to study education under the disciplines of research and experimentation which only the universities could provide.

Dewey pursued the point with additional reasons: (1) The traditions of localism militated against centralized planning and supervision of American education, yet, there was an undeniable need for direction. In the absence of a National Ministry of Education, the universities were natural and proper centers for producing leadership and organization. They could substitute the authority of science and philosophy for that of bureaucracy.

> It is for them to gather and focus the best that emerges in practices of the present; it is for them to experiment in the development of more adequate conceptions of subject matter, and to issue the results to the schools with the imprimatur not of officialdom but of intelligence.[4]

(2) Rapid intellectual advances in the closing decades of the nineteenth century posed another problem for the schools. Dewey described this trend as having a disintegrating effect on the curriculum at all levels:

> The pressure began in the college and high school. It is now finding its way into the primary grades, partly from the continued pressure from above for such training below as will relieve the difficulties of the situation above. It is as nearly certain as any education expectation may be that if the increased demands as regards number of languages, range of literary study, of history and of physical and biological sciences are to be met, even halfway, in the college and high school, the response must proceed from changing the methods in the lower grades, and by beginning work along those lines in the primary school -- yes, and in the kindergarten. It is not a mere question of local expedience, whether it is advisable here and there to modify the traditional "three R's" curriculum. It is a question of the right organization and balance of our entire educational system and in its adjustment to the existing social environment.[5]

The pressures to introduce new content at each level were heavy and varied. The danger was that the schools would lurch along, responding to one interest group after another, grasping at fads to ward off criticisms. Chaos and waste could result. An agency was needed to bring order into meeting the problems deriving from what later was referred to as "the knowledge explosion." Dewey held that the universities should serve in this task:

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[4] Ibid., p. 290.

[5] Dewey, "Pedagogy as a University Discipline," University Record, p. 354.

> This reconstruction may go on in a haphazard way....now trying this scheme, now abandoning it for that, without consciousness of the ends to be reached....and with all the waste of time, money and human life involved in such change. Or it may go on with some clear, if flexible, consciousness of the nature of the problem, of the ends to be met, and with some adaptation of means to these ends. The latter conditions ought to be most clearly met at a university where psychology and sociology are most systematically pursued: where scientific inquiry is at its height and where methods of work are most fully developed. In addition it is at the university where there is the accumulation of the quantity and quality of knowledge which is trying to break through into the secondary and primary school systems. That is to say, the experiment of the introduction of science matter as well as method. It is reasonable to suppose that it can most fruitfully and efficiently be attempted where this subject matter is most adequately and accurately represented....Where specialists abound, where the laboratory and the library are thoroughly equipped, is, if anywhere, the place where such requirements are met.[6]

Having affirmed that problems of both method and content deserved the attention of university scholars, Dewey then sketched the outlines of a program for the study of education. In the 1907 article, while Professor of Philosophy at Columbia, he attacked those "Bourbons of Culture" who dismissed education as a subject of university study. Their tiresome habit, he argued, was to equate educational theory with the peddling of trivial techniques and spurious panaceas. Others, more fair-minded, seldom gave thought to the significance of the scope of education as a field of inquiry. Dewey saw the matter differently:

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[6] Ibid., pp. 354-355.

> It may be asserted, without danger of successful challenge, that no subject touches life on so many sides and brings with itself such a wealth of materials combined with such stimulating outlook upon the past and present humanity.[7]

He found it paradoxical that education would be made a subject of near reverence in American life, while political scientists and sociologists neglected the study of it. In bringing education into the framework of the university, he saw two major areas of inquiry deserving attention: the administrative and the scholastic.

Under "administrative" Dewey included the range of questions about the school as a social and political institution. In order to see the intricate relations of education to other institutions and to social ideals, he suggested comparative studies of other cultures. This should include a historical dimension that would encompass the school system of the ancient Egyptians, Hebrews, Greeks, and Romans, as well as more contemporary systems. Another facet would bring the economics of education and school politics within the range of scholarly research. American education was plagued, he argued, with serious financial problems: in a time of school expansion there was an inadequate school plant; teachers demanded better salaries;

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[7] Dewey, "Education as a University Study," Columbia University Quarterly, p. 285.

students were on part time schedules; there was a need for a more rational way of classifying teachers for rates of pay; and the like. He found it hard to understand why universities would offer systematic study to help their students think intelligently about other social and political questions but leave them in ignorance where the institution of education was concerned. There were other urgent administrative problems such as: the relations of local, state, and federal agencies, the need of a rationale for consolidation of schools, and the definition of the functions and proper relations of boards of education and school administrators. "Unless such matters somewhere are made the objects of systematic study, they will continue to be settled in the future as in the past, by clamor, rule of thumb and the interests of ward politicians."[8]

Dewey also included under "administrative" hygienic and aesthetic questions. American schools were housed in drab factory-like structures, spruced up with castle-like turrets, and busts of Julius Caesar. Could not more viable designs, appropriate for educational purposes, be created? The matter of how to provide good light, heat, ventilation, sanitary facilities, educational equipment, and play space also deserved careful thought. Architects would be required for technical details, but answers should not be formulated in isolation from ideas of well conceived educational theory.

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[8] *Ibid.*

Dewey maintained that the scholarly or academic side of education also needed to be developed. Just as education as a social institution can be understood only in the context of related institutions, so, too, educational thought must be understood in relation to the general history of ideas -- to ideas in philosophy and religion, among others:

> No reason can be given for neglecting this that would not apply with equal, or greater force to the history of science or philosophy. The theoretical study involves the generalization of this historic material, the various systems of pedagogy which have emerged, together with a thorough discussion of psychology and sociology in their bearings upon the selection, arrangement and sequence of the studies of the curriculum and the methods required to give them their full efficiency.[9]

He thought, too, it would be only a matter of time until a set of topics concerned with the sociology of the child, now scattered in areas such as penology, law, economics, and medicine, would be brought together under the head of education, or "some other rubric." As he put it, "each society has continually to maintain its life by renewing it through the immature."[10] Specific concerns become vital to it, such as child education, compulsory education, reform schools, the training of children with various handicaps, after school programs, evening schools, and many others. There was no valid reason why the university should fail to make these matters subjects of research and inquiry.

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9. Dewey, "Pedagogy as a University Discipline," p. 362.

10. Dewey, "Education as a University Study," p. 286.

(3) Dewey described a third set of questions which needed to be made the subject of research. These included problems of how to teach children effectively and how to understand and direct behavior in the classroom. He argued against the concept of methods as tricks of the trade. Method and subject matter could not validly be divorced from each other. Method had to be approached in terms of examining how the abstractions of a given subject matter could be "put into its concrete connections with the rest of the world of knowledge and culture and with the life of man in society."[11] Then, projecting an idea he was to put to work in his own Laboratory School, Dewey said, "There is opportunity and demand here for the most progressive psychology in *determining the relation of studies to the mind in its various stages of development*."[12]

In the 1907 article, he stated that psychology was in its scientific infancy but that the problems involved in the teaching of the whole range of subjects such as reading, writing, arithmetic, foreign languages, or manual training, were either proper topics for systematic investigation or were dependent on uninformed habits.

Finally, he maintained that philosophy itself could be revitalized by being forced to re-examine some of its time-honored questions in terms of practical issues in education: theories of knowledge could attain significance when examined in terms of the relations between intellectual training and the control of conduct or when the educational problem of the relation of science to the arts was considered. Problems of the relations of mind and matter would become real when the respective claims of liberal culture and serviceable skills within the school were made a subject of scrutiny.

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[11] Dewey, "Pedagogy as a University Discipline," p. 362.

[12] *Ibid.* (Author's italics.)

Dewey reminded his readers that a university discipline comes into being, in part, as it brings a sector of the world under systematic investigation and research. Thus, psychology broke away from philosophy; political science became the study of political institutions when it was separated from history and philosophy. He maintained that the institution of education deserved as much attention as economics, politics, or religion, especially since education occupied a new level of significance in an era of science and technology. The way to begin to bring more rigor into the study of problems in education was to employ the research techniques and findings of allied disciplines. He said of educational administration, for example:

> It is not a matter of crude speculation nor of doling out arbitrary empiric devices, but of getting together a definite sphere of historical, sociological, and economic facts, and of combining these facts with others drawn from physiology, hygiene, and medicine, etc., and of effecting a working synthesis of this great range of scientific data.[13]

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[13] Ibid.

He felt, too, that there was an urgent need to replan the content of studies because of the rapid expansion of knowledge. In this task the collaboration of university scholars also would be indispensable.

> ....[It] is at the university where there is the accumulation of the quantity and quality of knowledge which is trying to break through into the secondary and primary school systems. That is to say, the experiment of the introduction of science or history into lower education is a matter of subject matter as well as method. It is reasonable to suppose that it can most fruitfully and efficiently be attempted where this subject matter is most adequately and accurately represented....Where specialists abound, where the laboratory and the library are thoroughly equipped is, if anywhere, the place where such requirements are met.[14]

Interdisciplinary cooperation was an important part of his plan for the work at Chicago.

A further important step was required to bring education within the framework of university graduate study. Those whose work is in a university discipline do more than gather and systematize the attainments of the past. They are expected, also, to evaluate these accomplishments with reference to contemporary needs, and to make contributions to knowledge. Researchers need a setting which contains problems into which they can inquire. Dewey drew the conclusion that investigators of pedogogical questions needed a laboratory school "which shall test and exhibit in actual working order the results of the theoretical work."[15]

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[14] Ibid., pp. 354-355

[15] Ibid.

He followed his own advice by founding the Laboratory School at Chicago. We shall study the work pursued there in the chapters to follow. First we wish to examine in more detail how he tried to implement his recommendation for interdepartmental collaboration in the study of education.

B. An Interdisciplinary Approach

The University of Chicago campus in the 1890's was an exciting place. President William Rainey Harper was one of the most dynamic and creative university presidents this country has seen. Backed by Rockefeller money, the University opened in 1892 with a burst of energy and activity. A remarkable number of America's finest scholars were soon induced to take research and teaching positions and to furnish leadership as chairmen of departments. Dewey's own staff included scholars such as George H. Mead, James Tufts, and James Angell in philosophy and psychology, Charles H. Thurber and Ella Flagg Young in education, and the Herbartian leaders Charles De Garmo and Frank and Charles McMurry as visiting lecturers. They could hold their own even on this star-studded campus.

Dewey adopted a style of work that involved him in lively interaction with many of his colleagues on campus. He later said that his personal contacts in this period had more influence on his thinking than in reading books, and that contacts formed through the Laboratory School were among the most important of these.[16]

He often could be seen in lively, informal discussion with one or more colleagues from his own or other departments.[17] It was indeed fortunate for Dewey that many of the leading scholars and departmental chairmen were genuinely interested in educational problems of the lower school. They contributed not only their energy and ideas, but also their support. One could see evidence of their influence and participation in many of the features of the Laboratory School.[18]

John M. Coulter, Chairman of the Department of Biology, planned and guided the experiments on plant relations and wrote a series of important articles on the teaching of science at the various levels of education.[19] Thomas C. Chamberlain, framer of the planetesimal theory of the origin of the planetary system, made available to teachers and children ideas from his studies and directed the construction of a geological mock-up table.[20] The idea of evolutionary development of mind was much in the air. It was being employed in the pioneering work in anthropological theory by Frederick Starr and W. I. Thomas.

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[16] Jane Dewey, "Biography of John Dewey," p. 28.

[17] Reported in a conversation to the author by Dr. (Mrs.) W. W. Charters and Dr. Frederick Eby who were graduate students in the Department at the time.

[18] See, for example, Katherine C. Mayhew and Anna C. Edwards, *The Dewey School* (New York, D. Appleton-Century Co., 1936), pp. 4, 10.

[19] See the series of articles by John Coulter, "Some Problems in Education," *University Record.* ___

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Dr. (Mrs.) W. W. Charters,[21] who was doing doctoral work under Angell at the time, recalls seeing Dewey conversing with Starr on a number of occasions. Her recollection is that Starr stimulated Dewey to see the significance of the evolution of social life and that the units on the primitive stages of development in the Dewey School and the approach to the study of Greek civilization were influenced, in part, by Starr's ideas.

Scholars from other departments who were mentioned as helpful collaborators[22] were Albert A. Michelson in physics, Jacques Loeb in physiology, Charles A. Whitman in zoology, Rollin Salisbury in geography, and George Vincent in sociology.

Further evidence of interdepartmental cooperation is furnished by the cross-listing of courses in other departments in the Register of the University of Chicago in these years. Some examples from the bulletins for 1895-6-7 may illustrate the point: Under sociology-anthropology, W. I. Thomas is listed for "The Child in Folk Psychology," "Sex in Folk Psychology," and"Primitive Art;" Albion W. Small for

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I. "The Act of Teaching" (May 21, 1897), pp. 65-67.
II. "Science in Secondary Schools" (May 28, 1897), pp. 77-80.
III. "Over Production of Teachers" (June 11, 1897), pp.90-91.
IV. "The School and the University" (June 4, 1897), pp.97-99.

See also Albion Small, "Some Demands of Sociology upon Pedagogy," American Journal of Sociology, Vol. 2, No. 6 (May, 1897), pp. 839-851.

20. Told to the author by Dr. (Mrs.) W. W. Charters who was doing doctoral work under Angell at the time.

21. Recalled for the author in an interview November 15, 1963.

22. Mayhew and Edwards, op. cit., p. 10.

"Outlines of Constructive Social Philosophy" and "Philosophy of Society." Professor Goodspeed's course on the "History of Greece" is listed together with others on Greek language and literature. A variety of courses in zoology, physiology, and neurology are offered, including one on "Theories and Facts of Heredity and Evolution." In addition, ten courses in comparative religion and the aesthetics of literature are listed. Included in the 1902 Register, as Advisory Members of the School of Education, are Coulter, Chamberlain, Vincent, and Salisbury, and William Garner Hale, Head of the Department of Latin, and William D. MacClintock, Professor of English.

One can hardly resist observing that as educationists and their academic colleagues in the 1960's are once again feeling their way back to each other after disastrous estrangement, that both might reflect on the practice followed at Chicago at the beginning of the century.

Dewey was stimulated and assisted, also, by colleagues within his own departments of philosophy, psychology, and education. George Herbert Mead undoubtedly was the most influential. Dewey brought Mead from Michigan. For many years, the Meads and Deweys lived in the same building in Chicago, and Dewey said his friendship with Mead was one of the most precious possessions of his life. In a later tribute,[23] Dewey called Mead the chief force in the

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[23] John Dewey, "George Herbert Mead as I Knew Him," University Record, Vol. 27, No. 3 (July, 1931), pp. 173-177. Or, John Dewey, "George Herbert Mead," Journal of Philosophy, Vol. 28 (June, 1931), pp. 309-314.

United States in turning psychology from introspection to an alignment with biological and social data and concepts. While describing him as a scholar with a remarkable range in literature and the sciences, Dewey said Mead's professional thought was unified by a central problem: the relation of the individual mind and consciousness to the world and society. Mead's ideas on the social origin and nature of mind and self caused a revolution in Dewey's thought. Dewey said it was only over a period of time that he began to see the full implications of Mead's thesis that "the individual mind, the conscious self was....the world of nature first taken up into social relations, and then dissolved to form a new self which then went forth to re-create the world of nature and social institutions."[24] Mead provided a depth to the concept of mind and thinking that was at the heart of Dewey's philosophical and educational writings.

More specifically, Mead's study of the psychology of the act in its biological origins, and his analysis of the educational components in the play and role-playing of children influenced the approaches to early childhood education in Dewey's School.[25]

James Angell was a copartner with Mead and Dewey in developing a functionalist psychology. His experimental psychological laboratory made important contributions to the effort to give a scientific base to psychology. Dewey fought on a number of occasions to get Angell the financial resources necessary to support his research.[26]

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[24] Dewey, "George Herbert Mead as I Knew Him," p. 176.

[25] George Herbert Mead, "The Relation of Play to Education," University Record, Vol. 1, No. 8 (May, 1896), pp. 141-145.

James Tufts worked with Dewey in elaborating the ethical theory of experimentalism. He collaborated, too, in a course for the parents of the elementary school.

In addition to the intellectual stimulation of the campus, Dewey and his staff took an active part in civic and social projects. Dewey was a frequent participant in Jane Addams's activities at Hull House and served on the Board of Directors for a time. Mead was active in the University of Chicago Settlement, the City Club of Chicago, and the Vocational League.[27]

As noted previously, an important part of Dewey's plan was to create a school that would serve as a laboratory for research and experimentation in education. In such a Laboratory School he hoped to utilize various resources of the University. In later chapters we shall take a close look at details of the Laboratory School. Dewey's ambition, however, was nothing less than to create a new conception of the teaching profession. We turn next to the image of teaching represented in Dewey's thought.

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[26] See, for example, John Dewey's letters to William Rainey Harper, The President's Papers, University of Chicago (May 13, 1897: December 21, 1899: February 3, 1900).

[27] James Tufts, "Extract from the Address by James Tufts," University Record, Vol. 27, No. 3 (July, 1931).

CHAPTER V

A VIEW OF TEACHING AS A PROFESSION

The goal of the School of Education was to produce teachers with a fresh vision of the work of their profession. The Laboratory School was designed to contribute to this end. Having examined the nature of Dewey's general rationale for educational work, it would seem appropriate to turn to the school to see what happened to his philosophy when it was put to work. We offer, however, a transition chapter which, at first glance, appears to be incongruous. The bulk of it consists of an analysis of a paper Dewey published in 1904, under the title, "The Relation of Theory to Practice in Education."[1] It purports to deal with the narrow subject of practice teaching. In fact, though, it pictures the image of the teacher that Dewey proposed for reform of the teaching profession in America. The characteristics contained in it stem directly from the conceptual framework that undergirded the Laboratory School. An examination of this image now may enable us later to gain a more perceptive view of the Laboratory School itself. It may serve to lay to rest, too, certain popular stereotypes about Dewey and the field of teacher education.

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[1] John Dewey, "The Relation of Theory to Practice in Education," Third Yearbook of the National Society for the Scientific Study of Education, Part I (Chicago, University of Chicago Press, 1904). Now available in reprint form as Bulletin No. 17 in a series published by the Association for Student Teaching, State College of Iowa, Cedar Falls, Iowa. (Quotations are from this second ed.)

In the title of the article, "The Relation of Theory to Practice in Education," we find the continuity that linked his approach in education to the basic concern in his general philosophy: how to relate idea and reality toward the end of enriching experience? In this case, the occasion for raising the question is an exploration of the problem of how best to prepare teachers. Whoever confronts this particular problem must consider certain related tasks: (1) to clarify the end product of the educational process one hopes to realize, (2) to clarify the kind of teaching and the kind of teacher required to secure that end, and (3) to develop a rationale and a program of education that might produce such a teacher. Dewey's philosophy and his work in the Laboratory School equipped him to try his own answers to the questions.

In brief, his goal was the enrichment and growth of experience -- intellectually, ethically, emotionally, aesthetically, and spiritually. Teachers were needed who themselves were sharing such a process and who were sensitive to the conditions that could foster or thwart it in their students. To assist them, they needed professional experiences to point out what was required to move in this direction. They needed, in short, to become permanent students of education. This required the habits of mind that characterize the modern laboratory.

The last statement fits the main thrust of Dewey's work at Chicago, but needs explanation. In the paper under consideration, Dewey himself tries to sharpen the concept. He assumes that theory and practice both have a place in the education of teachers. There is wide agreement on the point, but how are they to be related? He contrasts two approaches: (1) The apprentice idea versus (2) the laboratory idea. They lead to different kinds of teachers.

The apprentice idea has wide and understandable appeal. The pressures are great to secure large numbers of new teachers who can move into classes of thirty to sixty children, keep order, and proceed with a definite plan of work. The apprentice scheme concentrates on equipping teachers immediately with as many details of the craft as possible. They are asked to learn the discipline techniques of a master teacher; they are equipped with detailed lesson plans designed by experts and guaranteed to produce results. Dewey did not try to dismiss with ridicule the problem at hand nor the well-intentioned efforts to meet it. He acknowledged the trying difficulties for the new teacher in confronting large classes of squirming youngsters. Pleas for help were justified. Nevertheless, he felt obligated to question the efficacy of the approach. It aims at turning out finished masters of the craft through extensive and detailed practice. The laboratory idea, on the other hand, aims at _control of the intellectual methods_ required for personal and independent mastery, through "typical and intensive" experiences in the training period.[2]

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[2] _Ibid_., p. 3.

Dewey admitted the value of apprenticeship, but said it is based on the false assumption that a finished teacher can be produced in training. The short time available should be used to gain scientific insights that can continue to be used for long-range professional growth. If these are missed during training, it is difficult to secure them later, while increased proficiency in technical skills can be learned on the job. More specifically, he argued that the emphasis on securing proficiency in teaching skill and discipline tends to turn the attention of the student teacher to the wrong concerns which mitigate against a really productive learning experience.

There is a basic fact, he said, which every true teacher knows, but which may be obscured for the neophyte by the sheer complexities of the classroom. There are external and internal levels of attention present in pupils. The external behavior consists of the conventional responses children learn to make to please the teacher. The teacher who mistakes these for the whole of teaching will never get the class to go beyond the level of "teacher talk." [Readers of Martin Buber will recognize this as the "I-It" level, the level of chatter without involvement, which is a curse of contemporary man.] The real teacher knows, however, that another order of reality is present: the inner play of thoughts, images, and emotions in response to the subject matter at hand. Dewey calls this:

> ....a fundamental condition of mental growth. To be able to keep track of this mental play, to recognize the signs of its presence or absence, to know how it is initiated and maintained, how to test it by results attained, and to test apparent results by it, is the supreme mark and criterion of a teacher. It means insight into soul-action, ability to discriminate the genuine from the sham, and capacity to further one and discourage the other.[3]

When student teachers are pressured simply to teach "good lessons," they can be taught to miss what is at the heart of the work.

Fixing attention on these secondary matters can have another consequence. It leads to "the formation of habits of work which have an empirical rather than a scientific sanction. The student adjusts his actual methods of teaching, not to the principles which he is acquiring, but to what he sees succeed and fail in an empirical way from moment to moment."[4] Thus, habits of teaching are formed without relation to psychological, sociological, or philosophical principles or theory. This illustrates one of the chief evils of the profession.

> There is an enthusiastic devotion to certain principles of lofty theory in the abstract -- principles of self-activity, self-control, intellectual and moral -- and there is a school practice taking little heed of the official pedagogic creed. Theory and practice do not grow together out of and into the teacher's personal experience.[5]

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[3] Ibid., p. 6.

[4] Ibid., p. 7. (Dewey's italics.)

[5] Ibid., pp. 7-8.

This dualism is the death of teaching.

The question at issue is critical for the profession: what habits of thinking are to be brought to the job? Dewey argued that a healthy profession requires people who have learned to apply the criticism of intelligence to their work. To do this, they must be saturated with their subject matter and with the habits of observing and reflecting in terms of psychological and philosophical concepts. Teaching becomes a profession only when it is composed of thoughtful and alert students of education.

The apprentice approach may appear to be superior, as its products operate with smooth efficiency during their first weeks. This is a hollow gain if they have not been equipped with the professional habits required for self-directed growth.

> Such persons seem to know how to teach, but they are not students of teaching. Even though they go on studying books of pedagogy, reading teachers' journals, attending teachers' institutes, etc., yet the root of the matter is not in them, unless they continue to be students of subject matter and students of mind activity. Unless a teacher is such a student, he may continue to improve in the mechanics of school-management, but he cannot grow as a teacher, an inspirer and director of soul-life.[6]

We may note with special care several items in this statement: A real teacher is one who continues to be a student of subject matter and of mind activity. We have here the fundamental ideas, not only for teaching, but for education in general to which Dewey riveted his attention. A theme is sounded that pervades the whole of the Laboratory School enterprise. It recurs again and again in his writings on education, from The Child and the Curriculum (1902) to Experience and Education (1938).

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[6] Ibid., p. 8.

In the article before us, he says he will try to clarify the point by reference to the role of psychology in education. We shall have to forego the details of his argument and reach for the heart of it.

There is the need, first, to distinguish educational psychology from psychology in general. He stressed two distinctions: (1) Educational psychology is concerned with the goal of human growth -- with the conditions that foster or arrest it, and (2) it pays special attention to social interaction -- to the interplay of minds on each other. General psychology has other goals. It is concerned with understanding everything that takes place in mental life. An important consequence is that

> no educational procedure nor pedagogogical maxim can be derived from pure psychological data....It is the subordination of the psychological material to the problem of effecting growth and avoiding arrest and waste which constitutes a distinguishing mark of educational psychology. [7]

In the preparation of teachers, this has a bearing on the differences in approach of the apprentice and laboratory methods. In classroom observations, the apprentice idea suggests a concentration on the methods and instrumentalities used by a good teacher in teaching a subject; one may hope to accumulate a store of techniques. The laboratory hypothesis stresses a different idea. The student teacher should be taught to observe the pattern of interaction of teacher and students -- how mind answers to mind. To help overcome the tendency to mere imitation, the student needs most, at this stage, practice in seeing:

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[7] Ibid., p. 13. (Author's italics.)

> what is going on in the minds of a group of persons who are in intellectual contact with one another. He needs to learn to observe psychologically -- a very different thing from simply observing how a teacher gets "good results" in presenting any particular subject.[8]

There remains the matter of subject matter. Dewey tried hard to show that in his laboratory model, the psychological-methodological part is a companion piece of the subject matter aspect of education. This is so because they are simply different dimensions of mind at work. As Dewey put it, "There is....method in subject matter itself -- method indeed of the highest order which the human mind has yet evolved, scientific method."[9] Any subject matter represents the ordering of some aspect of the world that man encounters. The generalizations, classifications, and interpretations contained in it represent the arduous efforts of human minds to bring order out of a welter of phenomena. It represents the need of the human being to see the world with more meaning -- and with that meaning attained, to explore the world and self still further. Scholarship itself, therefore, may be an effective tool in training good teachers; it can be an "object-lesson" of the finest type of mental growth, which is to say, of the educative process. By seeing that science, literature, and the arts are modes of thought-activity, students can gain psychological insights into the processes of effective thought in general.

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[8] Ibid., p. 12.

[9] Ibid., p. 15.

Dewey argued that this applied with equal force to elementary school teachers as well as for those working at higher levels.

> Otherwise, the current traditions of elementary work with their tendency to talk and write down to the supposed intellectual level of children will be likely to continue. Only a teacher thoroughly trained in the higher levels of intellectual method and who thus has constantly in his own mind a sense of what adequate and genuine intellectual activity means, will be likely, in deed, not in mere work (*sic*) to respect the mental integrity and force of children.[10]

Teachers who have been taught to see their subject matter as a product of thought in action and who understand the disciplines that led to the advance of knowledge, can be more sensitive to signs of intellectual acitivity in children of four or youths of sixteen. We have here, he said, the clue to genuine teachers, whether they follow favored methodological techniques or not.

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[10] *Ibid*., p. 16.

> They are themselves so full of the spirit of inquiry, so sensitive to every sign of its presence and absence, that no matter what they do, nor how they do it, they succeed in awakening and inspiring like alert and mental activity in those with whom they come in contact.[11]

The position contains implications, too, for ways of conceiving problems of the curriculum. Approaches which center on stringing together well packaged but isolated lesson plans, or that teach the teacher to snatch at items that may be fitted into a cook-book formula, are harmful:

> What is needed is the habit of viewing the entire curriculum as a continuous growth, reflecting the growth of mind itself. This in turn demands....consecutive and longitudinal consideration of the elementary and high school rather than a cross-sectional view of it.[12]

In setting forth this conception of method and content, Dewey did not treat all of the problems to be met in realizing it. He did not, for example, discuss the minimum level of intellectual ability teachers must possess to work in this way. He did not treat the details of how academic scholars and educationists may cooperate to further the mode of grasping the meaning of subject matter so fruitfully. He did not discuss how often, in the daily round of teaching, it is possible to relate the meanings and factual details in organized subject matter to the range of experience in the lives of large classes of children.

On the other hand, it is not fair to say that Dewey ducked these questions in practice. The whole effort in

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11. *Ibid.*, p. 17.

12. *Ibid.*, p. 19.

the Laboratory School was to create a program consistent with the dictums just described.

An important task of the Laboratory School, as envisaged by Dewey, was to challenge limited and stereotyped conceptions of educational work. It should open a view to exciting possibilities for the profession, commensurate with the responsibilities that would be demanded of teachers in the new America.

This had to be accompanied by criticism of what was inadequate in current practice. The habit of viewing the teacher's social role as that of the ineffectual, ill-trained "school m'arm" or schoolmaster was one notion challenged by Dewey. The alternative that he projected was the image of the teacher as a student of his profession -- a person motivated to grow as a scholar, and equipped with techniques which could make him a partner in the research of professional problems with university colleagues. Not all teachers would play this role, and in practice the ideal could not be realized at once. But without the idea of a new kind of goal, there never could be a chance of lifting the sights.

Dewey built into the Laboratory School features to demonstrate the new possibilities. To do this, he deliberately avoided a conception of the Laboratory School as a typical school. One of its distinctive features was that it was part of a university. It should take advantage of that connection to exploit the opportunities available. Other school systems would have to use their own imagination in seeing which of the experiences created at Chicago might be adapted to their situations.

Mentioned previously was the opportunity for the school's staff to establish cooperative relationships with the brilliant scholars on campus. By conceptualizing the school as a laboratory where people were interested in inquiry and investigation, Dewey created a milieu that made scholars receptive to collaboration. Mayhew and Edwards, who were on the staff, report that this led to an easy accessibility to many scientists who were leaders in their various fields. Upon encountering teachers with genuine intellectual interests many of these professors proved to have unusual pedagogical interests which led to their giving constant intellectual and material help to the teachers of the school.[13] Dewey took seriously his injunction that elementary school teachers should constantly be engaged in genuine intellectual activity.

At the end of the third year of the School, the administrative arrangements for the curriculum were given a departmental form analogous to that of the university. The staff was small but organized into the following departments: kindergarten, history, science and mathematics, art, music, languages, domestic sciences and industry, manual arts, and physical culture. Each department was headed by a qualified director whose social and technical training combined with practical experience enabled him to deal intelligently with the problems encountered in the daily pursuit of classroom activities.[14] This director was also trained to investigate the different branches and adapt the different sciences to the needs of primary pupils. It was hoped that schools of the near future would be equipped with such teachers.

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[13] Mayhew and Edwards, _op_. _cit_., pp. 3-4.

While the instructors at the school had a main responsibility to their students, it was assumed that there should be some among them, trained in research techniques, who could work with university colleagues in advancing knowledge. The director of a department, for example, was a trained investigator

> ....who realized that her intelligent reports of the results of testing certain educational theories in the actual practices of her classroom were to constitute scientific findings for study and revision by other teachers, administrators, and students of educational science. As an investigator she had no fixed or final set of objectives, but each day of teaching enabled her in the light of her successes or failures to revise and better these objectives.
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> The reports made weekly in typewritten form, furnished the data of the problems for study and discussion in the weekly informal conference of teachers, as well as in the more formal seminar groups and larger pedagogical club meetings. Thus all the teachers in actual daily contact with children of all ages

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[14] Ibid., pp. 374.

> furnished, in these reports, the data for further inquiries and conclusions. The value of such material to the Department of Pedagogy of the University, engaged as it was with the problems of educational science, became almost like the systematic and cumulative clinical records of medical science.[15]

Needless to say, a teaching profession conceived in this fashion would have attractions that might draw to it the ablest young men and women in society. Certain conditions, however, would be required to make such a goal a reality. One of these was a limitation on class size and teaching load that could make the job something other than the processing of large numbers of children. This brings one into head-on conflict with the matter of school finance. Dewey personally confronted the problem. In the hard and continuing battle of the budget during the early years, President Harper, at one time, exerted pressure on Dewey to increase class enrollments to augment revenue from tuitions. This forced Dewey to take a position. In a letter to Harper of June 23, 1898, he wrote:

> As for your point regarding the size of groups, I can only repeat what was said that day, that continuous and earnest attention has been given to the matter, and that as it now stands, it is a matter of principle and not of detail. I think that any increase forced in this direction simply for the sake of additional revenue would involve such a complete change in the ideals and methods of the School as profoundly to modify its whole character -- so profoundly

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[15] Ibid., pp. 373-374. The weekly reports were never published but are available in the Archives of The University School at the University of Chicago. They vary in scope and quality but constitute a fascinating record of work pursued there.

> indeed, that it would lose whatever reason for existence it now possesses as an educational undertaking.[16]

Another condition required to attract the kind of persons capable of building such a profession involves the concept of administration. Teachers trained as Dewey recommended would be self-reliant and proud of their profession. They would not tolerate small-minded or paternalistic administrators who would deny them the chance to work with imagination and integrity. Dewey was not the perfect administrator. He was far from blameless in the wrangles with Parker's staff, particularly with Wilbur Jackman,[17] but the record is clear that, in the main, he gave considerable freedom of initiative to creative teachers and encouraged a free give and take of ideas in a lively intellectual climate.[18]

More than six decades later, we must say in all candor, Dewey's ideal is more relevant than ever, yet still remains to be realized. A full accounting for the limited progress to date constitutes one of the sorely needed studies about twentieth century American education. It may be that the pressures of an expanding educational system were just too great. An imaginative use of new technology may bring the ideal closer to our grasp. One thing is certain, it will never be realized without the vision, without defining the conditions of money and personnel required, and without a struggle to bring them into being.

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[16] John Dewey, Letters to William Rainey Harper, The President's Papers, University of Chicago (June 23, 1898).

[17] See Robert L. McCaul, "Dewey and the University of Chicago," School and Society, Vol. 89, Part 2 (April, 1961), pp. 179-183 and Part 3 (April, 1961), pp. 202-206.

[18] Mayhew and Edwards, op cit., pp. v-vi.

CHAPTER VI

THE PSYCHOLOGICAL THEORY FOR EXPERIMENTATION IN EDUCATION

In 1896, Dewey's dream of a University Laboratory School became actuality. Even though it began humbly with only a dozen students, it quickly grew in numbers and won the loyal support of the parents and friends who shared Dewey's vision. Our purpose is to reflect on aspects of its theory and operation to understand how it fit into Dewey's general plan for work in education.[1]

The preceding chapters showed that Dewey pictured true professionals as persons who would be "students of subject matter, and students of mind activity." Thus, universities had the responsibility to create, through research, a theory and a philosophy of education upon which work in the profession could be based. This could not be done without an educational equivalent to the laboratories in the sciences. For Dewey, this meant the creation of an actual school where ideas growing out of the psychological-philosophical theory of his staff would be tried and tested.

As the Director of the University School, he had the obligation to state its special purposes on many occasions during its existence. There is a high order of consistency in these expositions. He emphasized that as a Laboratory School of the University its most important function was to contribute to the progress of scientific thought in education.[2] He acknowledged that its program had to be effective to justify its existence for parents and supporters; but they, too, had to understand the School's primary obligation. He made clear that it was not intended to be a normal school for the training of teachers, nor a model school offering specific answers for the immediate problems of the public schools. The hope would be eventually to influence practice through creating a more firmly grounded theory and demonstrating its applicability in action.[3] Such work required a climate of free investigation where well considered hypotheses could be tried and examined in terms of factual results without being fettered by long-standing traditions or pressure for quick results. In order to accomplish this, conditions would be set up to provide rich educational experiences -- conditions that would make it impossible to rationalize failures on the grounds of inadequate resources. This meant that no effort was made to duplicate the situation of "normal" classrooms.

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[1] This focus precludes a narrative history of the school itself and Dewey's struggles to maintain and expand it. These details are available elsewhere.

> If it is advisable to have smaller classes, more teachers and a different working hypothesis than is at present the case in the public schools, there should be some institution to show this.[4]

The values and ideas characterizing the ideal of university research were to prevail.

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[2] John Dewey, "The Psychology of the Elementary Curriculum," The Elementary School Record, Vol. 1, No. 9 (December,1900), p. 221.

[3] John Dewey, "The University School," University Record, Vol. 1, No. 6 (November, 1896), pp. 417-418.

[4] Ibid.

What was to be at the center of the effort? Dewey's ninth and final monograph in a series about the school (1900) evisaged it as a laboratory for psychology applied to education:

> A place for the study of mind as manifested and developed in the child, and for the search after materials and agencies that seem most likely to fulfil and further the conditions of normal growth.[5]

We find a re-statement here of themes previously discussed: (1) educational psychology was to be concerned with the conditions which foster growth and (2) the school as a research center was to be concerned with the study of the learning process and of the organization of subject matter; both were to be seen as aspects of "mind activity."

The latter two items involve two questions that must be answered by anyone starting a school. What is to be taught? How is it to be taught?

The description of the school as a psychological laboratory gives the impression that the emphasis was to be on learning theory and method. Such an interpretation would fail to acknowledge a repeated insistence by Dewey that questions regarding content and method could not be considered in isolation from each other. This, in turn, was related to the conviction that the central educational problem was a concern with the evolution of mind or minded behavior. The social-psychological side dealt with an analysis of the processes of mental life that facilitated the growth and emergence of effective thinking in human experience. On the curriculum side, the subjects were to be seen as case studies of the disciplined thought processes that, by extending human knowledge and experience, have gradually enabled man to understand the nature of his world. Dewey's definition of educational psychology required that it be as concerned with the problems of curriculum content and sequence as it was with questions of methodology. In this sense, the term laboratory, as applied to his school, must be viewed as a laboratory for educational psychology.

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[5] Dewey, "The Psychology of the Elementary Curriculum," pp. 221-222.

Having underscored Dewey's point about the importance of treating problems of subject matter and method in conjunction, we must now consider them separately. Dewey is a thorough-going contextualist. Every item in experience is related to a network of supporting factors; yet, in exposition the human mind is required to work in linear fashion. Not all things can be discussed at once. Before completing our analysis of the Dewey school, we shall try to show the intimate relation between its "psychological" and academic features. Because each needs special treatment, we shall begin with the psychological side of the continuum and later shift over to subject matter.

A. The Psychological

The supreme problem at the time Dewey was formulating his views of education was the question of the evolution of the mind of man.[6] Surely this was the great question for him, and the response his work received indicates he was speaking to a deep and widely felt need. The challenge was coming from science -- more specifically from evolutionary theory, broadly conceived. It contained dimensions that were, at the same time, exciting and frightening. On the one hand, there was the picture of emerging life and experience with man as a participant; on the other hand, man seemed diminished by the loss of his special place outside of nature and by his reduction to a minute entity in the immensities of space and time. Was it possible to have a philosophy that coincided with reality as revealed by scientific investigation yet preserved an image of man as possessing dignity and purpose? There was, and is, a great humger for the answer to that question.

Dewey, himself, knew the need in a deep and personal way. He found that in the problems of education the most profound philosophical questions were brought to focus. What was really involved in the fact that an infant, entering the world helpless, could achieve an awareness of his existence on a planet that revolves about a star in a universe of infinite galaxies? How was it that man could lift himself from a state of nakedness, grubbing for worms, to become the creator of civilizations stocked with plenty, yet dogged by the war of man against man? How account for savagery and cruelty along side the emergence of ideals of justice, equality, charity? Could children be educated in ways to enhance man's positive potential and reduce the destructive? These are ancient questions. Evolutionary theory required the formulation of new answers. Dewey was one of those who set out to create a new image of man that would coincide with the new perspective. To the end, he was aware of the limitations of his efforts.

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[6] I am indebted to Professor Frederick Eby (emeritus) of the University of Texas for helping me to see the centrality of this question.

Philosophical questions brought him to education. The process of educating the young into their humanity was dependent upon an answer to the question of what is involved in the process of learning, or, in traditional terms, what is the nature of man's mind? Dewey was convinced that the traditional answers were undermined by the new advances in science. On the other hand, he was unconvinced by some of the propositions that, thus far, had grown out of the scientific orientation itself. In our biographical sketch, we saw the young Dewey resistant to the disjunctions inherent in the great dualist tradition which defines man in terms of dichotomous substances of mind and body. We saw his initial response to the organic holism he found in Huxley's Physiology. Although he was attracted to the Hegelian alternative to dualism, he gradually felt bound to relinquish this philosophy as he found it impossible to reconcile it with scientific findings. During the last decades of the nineteenth century, he remained a philosopher in that he continued to raise the large questions, but his inquiries pivoted around the effort to create a convincing psychological accounting of mind. He taught and wrote about psychology at Michigan and Chicago. Psychology was still in the process of disengaging itself from philosophy in order to become an autonomous branch of science. The physiological movement in psychology with an emphasis on laboratory research was providing a push in that direction. Within limits, he was a strong supporter of the movement. Contrary to the main tradition in philosophy, Dewey and his colleague Angell argued that psychology, broadly conceived, was the "natural history of the various attitudes and structures through which experiencing passes."[7] As such, it was indispensable in both method and content for work in philosophy. Dewey played a leading role, in collaboration with his colleagues George H. Mead and James Angell, in creating a bio-social conception of mind. In psychology, this was functionalism; in philosophy it was instrumentalism or experimentalism. These were related aspects of a single point of view.

The educational program of the University School can be understood only in terms of the concepts of this position, for they furnished the intellectual underpinnings for the theory and practice of the school. The working out of the details of this rationale -- Dewey's major preoccupation before and during his residence in Chicago -- was largely responsible for his turning to education. For the purposes of our story we need to understand the features of this new psychology which included biological, social, and philosophical dimensions. In addition, we shall attempt to trace its development in the relevant writings of Dewey during this period.

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[7] John Dewey and others, Studies in Logical Theory (Chicago, University of Chicago Press, 1903), pp. 15-16. See also, John Dewey, "Psychology and Philosophic Method," The University of California Chronicle, Vol. 2 (August, 1899).

The Evolution of his Psychological Theory

The working out of an alternative to traditional psychological theories of "mind activity" and to Hegelian idealism took place gradually over a period of years. In part, the search derived from his personal need for a more integrated view. The various features of his alternative were stimulated by his response to intellectual events of the period and to interaction with his co-workers.

The bio-social concept of mind and self obviously contained a strong biological component. This was the first feature to emerge and is understandable in terms of the exciting developments in biology. We have seen the great influence of James's Principles of Psychology that clarified for Dewey the biological origin of minded-activity. James broke free from the tendency to describe life structurally and emphasized the concept of life in action. The psychological dimensions of mind and thought were brought within this orientation. The processes of thought, such as discriminating, abstracting, and generalizing, were viewed as more elaborate functions of adjustment. The traditional view of conceiving mind as an entity apart from nature was replaced by seeing mind, or minded behavior, as an objective process of interaction of organism and environment, like breathing and walking.[8] Dewey himself acknowledged the revolutionary influence on his thought of James's work. Actually James acted as a catalyst in bringing clarity to ideas Dewey had been pursuing for some time.

As early as 1884, Dewey wrote an article, "The New Psychology,"[9] in which he wrestled with the impact of the new physiological approaches to psychological problems. In it he already was reaching to make the discriminations that were to characterize his mature thought of later decades. He applauded the effort of a physiological psychology that challenged the tendency to treat psychical life as consisting of "distinct ideas which are separate existences." He termed this the Eighteenth Century Approach as typified in James Mill's "calculating man" whose behavior is neatly determined by his efforts to increase pleasure and avoid pain.

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[8] Dewey, "From Absolutiosm to Experimentalism," in George P. Adams and William P. Montague, eds., Contemporary American Philosophy, pp. 24-25.

[9] John Dewey, "The New Psychology," The Andover Review, Vol. 2 (September, 1884), pp. 278-289.

> We know better now. We know that the life of man whose unfolding furnishes psychology its material is the most difficult and complicated subject which man can investigate ....We see that man is somewhat more than a neatly dovetailed psychical machine who may be taken as an isolated individual, laid on the dissecting table of analysis and duly anatomized. We know that his life is bound up with the life of society, of the nation.....[10]

He contrasted this with the movement of nineteenth century psychology and physiology "back to the mother soil of experience."[11] The revival of psychological investigation from a concern with abstract "ideas" and the effort to discern the physiological aspects of psychic phenomena was salutary; but he challenged the notion that demonstrating "some or all of the events of our mental life are physically conditioned upon certain nerve structure" ipso facto proves that psychic life can be explained completely in physiological terms.[12]

We see foreshadowed here his eventual criticisms of British empiricism and the physiological behaviorism represented in John Watson.

He did applaud biology for its introduction to psychology of the conception of organism and its employment of experimental methods.

His encounter with James's Principles of Psychology came before he left Michigan. He used it as a text for a course in psychology -- a course taken by James Angell, who shared the excitement of his teacher and became a co-founder of the Chicago School of functional psychology.

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[10] Ibid., pp. 278-279

[11] Ibid., p. 281.

[12] Ibid., pp. 281-282.

In 1896, the year of the founding of the Laboratory School, Dewey wrote "The Reflex Arc Concept in Psychology."[13] Here the organismic view became full grown and his break with Hegelian idealism was definitive. It became a landmark among the psychological writings that have influenced education.

In it he took up the attacks on dualist positions old and new, and tried to present a unifying psychological principle to supplant them. This time he concentrated his fire not on the older body-soul dualism but on the newer stimulus-response (S-R) variety. He argued that instead of treating stimulus and response as parts of the continuing, coordinated acts of an organism, the reflex arc had become a "patchwork of disjointed parts, a mechanical principle of unallied processes."[14] Dewey's argument was not with the reflex arc concept, itself, that had been borrowed from physiology, for he saw in it a potential for uniting a multiplicity of fact around one principle. But old notions were being read into it. Sensation was taken for stimulus and movement for response. Each was treated as a discrete element having its own independent existence. Thus, they were related in a causal-mechanical, "push-pull," chain.

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[13] John Dewey, "The Reflex Arc Concept in Psychology," The Psychological Review, Vol. 3, No. 4 (July, 1896), pp.357-370.

[14] Ibid., p. 358.

Dewey argued that the trouble lay in the concentration on the stimulus-response unit of psychological activity. His position was that S-R units are products of the psychologist's analysis, not the basic existential material in human experience. The fundamental factor was the total act of the organism. The child's reaching for the candle flame or pulling away from it were not responses "caused" by the sight of the flame. They were functions within the action of the organism and were determined by prior experience with candle flames as well as by mere exposure to the flame itself. In this sense, they had to be seen as functions in a well-coordinated series of acts. The psychologist who focuses merely on observation of stimulus and response reactions apart from the complete act breaks the total experience into artificial, isolated entities.

Dewey defined two situations from which distinctions of stimulus and response could be functionally derived. The first deals with ordinary habitual behavior which constitutes the bulk of experience. The second kind of situation arises when there is a break or disruption in habit.

In the first situation, habits are working in a well coordinated pattern in the activity of the organism. Stimulus can be distinguished from response, in such an orderly sequence of acts, only if we see man's activities as leading to some objective end.

> It is only when we regard the sequence of acts as _if_ they were adapted to reach some end that _it_ occurs to us to speak of one as stimulus and the other as response. Otherwise we look at them as a mere series.[15]

In such a series of acts, one act is designated as a response and acts as a stimulus to the next act (response), and so on. Each act leads into another; each serves as stimulus and response. By so designating them, we are simply analyzing aspects of finely coordinated behavior.

The second kind of situation in which functions of stimulus and response may be derived is a much more important aspect of Dewey's theory. In his view, experience is generally continuous; most of the time habitual ways of behaving work well. But there are occasions when experience is disrupted. Then there is the need to restore continuity.

When the habitual modes no longer work, man is confronted with what Dewey later was to call a problematical situation. Any discontinuity means that stimulus and response are no longer functioning in a well coordinated series of acts leading to some objective end. In such situations it is necessary to isolate the disturbing factor which has disrupted the path to the end. Faced with this predicament, Dewey maintained that to isolate the disruptive factor is to determine the stimulus. The determination of the course of action needed to restore continuity is the response.

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[15] _Ibid_., p. 366. (Dewey's italics.)

Dewey was rejecting the reflex arc as being composed of a chain of isolated stimulus-response entities. The proper view, he argued, was to see experience as a continuous whole. Even when this continuity of experience is disrupted, it is repeatedly restored. The existential matrix was the on-going experience of a living, acting organism. Stimulus and response, then, were to be seen as functions, dependent on each other, within a total act. They had meaning in terms of the act but not in themselves. The acts or functionings of the organism -- reaching, seeing, hearing, remembering, purposing in order to attain ends -- were the essential units of psychological activity. Efforts in psychology to analyze these apart from their context in experience was to resort to artificial "pigeon-holing."

At about the same time, Dewey elaborated related themes in a briefer article, "The Psychology of Effort."[16] He was concerned with the conscious sense of effort. Just as stimulus and response were seen to have meaning only within the total act, so effort was seen to appear and disappear within it. Effort appears in the context when discontinuity of experience occurs. Conscious effort was described as awareness of the necessity to select a mode of action (response) after the source of the disruption (stimulus) had been determined. An act is concluded by selecting a course of activity.

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[16] John Dewey, "The Psychology of Effort," Philosophical Review, Vol. 6, No. 1 (January, 1897), pp. 43-56.

> ....[The] process of execution, the use of means, is the process of integrating acts hitherto separate and independent, and putting together the result of fragments, into a single piece of conduct.[17]

Here, experience is not merely restored to its previous state, but is reconstituted.

> To make a new coordination the old coordination must, to some extent, be broken up, and the only way of breaking it up is for it to come into conflict with some other coordination; that is a conflict of two acts, each representing a habit, or end, is the necessary condition of reaching a new act which shall have a more comprehensive end.[18]

In conclusion, Dewey continued his functional treatment of psychological material by a brief reference to the role of attention. Attention, he said, arises in a conflict situation when a choice of actions has to be made and a new coordination affected. "Attending" is the continual selection of observations and ideas that can be joined together toward some end.

Even those with but a cursory knowledge of Dewey's thought will recognize in these articles conceptions fundamental to his whole instrumentalist theory. The basic model is biological: the living organism seeks to maintain itself in its environment. There is a basic continuity of experience occasionally disrupted by conflict or the breakdown of habit. This is accompanied by the need and drive to reconstitute adaptive, on-going behavior. Out of these disjunctive or "problematic" situations experience may be reconstructed. Functionalist psychology concentrated on how the organism functions, how it maintains activity. It paid special attention to behavior in troublesome situations.

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[17] Ibid., p. 54.

[18] Ibid., p. 55.

By the time these articles were written and the Laboratory School was getting under way, Dewey had rejected mind-body dualisms. The organism was seen as the fundamental actor -- not the mind or the body, but the organism in its total range of interaction with its environment.

B. The Social

This emphasis on organism reflects the biological emphasis of instrumentalism. One must hasten to emphasize, however, that it was a bio-social concept of mind developed by Dewey and his colleagues. Man's distinctive capacity to think reflectively in dealing with a problematic environment was dependent on the use of language, meanings, and fine tools of thought that had grown out of long human experience.

The social dimension of thinking and learning is emphasized, for example, in the 1900 monograph on "The Psychology of the Elementary Curriculum."[19] The idea stressed here and elsewhere is that to be human is to be socialized. The growth of individuals or of societies is dependent upon incorporating accumulated knolwedge and thought processes and bringing them to bear on life situations.

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[19] Dewey, "The Psychology of the Elementary Curriculum," pp. 221-232.

The social element is critical for human development. Processes of learning and thinking are advanced modes of adaptation and are continuous with evolutionary development.

Dewey again criticized approaches in psychology which held mind to be an individual affair in direct contact with an external world that shaped it. This theory maintained that mind would have been the same had there been only one in the universe. The psychology represented in the Laboratory School, on the other hand, conceived

> individual mind as a function of social life -- as not capable of operating or developing by itself, but as requiring continual stimulus from social agencies, and finding its nutrition in social supplies. The idea of heredity has made familiar the notion that the equipment of the individual, mental as well as physical, is an inheritance from the past and held in trust by him for the future. The idea of evolution has made familiar the notion that mind cannot be regarded as an individual monopolistic possession, but represents the outworkings of the endeavor and thought of humanity; that it is developed in an environment that is social as well as physical, and that social needs and aims have been most potent in shaping it -- that the chief difference between savagery and civilization is not in the naked nature which each faces, but the social heredity and social medium.[20]

Physical nature itself is transformed when social experience enters. Physical stimuli of light, sound, and heat are furnished by nature but the significance attached depends on the interpretations given to them by the society in which the person lives and acts.

> The bare physical stimulus of light is not the entire reality; the interpretation given

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[20] Ibid., p. 223.

> to it through social activities and thinking confers upon it its wealth of meaning. It is through imitation, suggestion, direct instruction and even more indirect unconscious intuition, that the child learns to estimate and treat the bare physical stimuli. It is through the social agencies that he recapitulates in a few short years the progress which it has taken the race slow centuries to work out.[21]

The biological base was supplemented by social meanings, skills, values, and attitudes. The theoretical conceptions of each were to have direct effects on the program developed by the University School. We shall return to this later.

C. The Logical

There is a special aspect of the social that requires attention: the nature and role of reflective thinking in the growth of experience. The extension of the psychological analysis into logical theory was required to incorporate the critical role of thought in reconstructing experience. Dewey undertook this expansion of his philosophical work in several important writings on logic during the Chicago period.[22] They are of interest because they constitute the ground from which his later expanded treatments of logic emanated. They also contain concepts that were incorporated into the educational theory and practice of the University School. We shall attempt a summary of points which bear most directly on matter affecting the school.

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[21] Ibid.

[22] Two of these are essays: John Dewey, "Psychology and Philosophic Method," University of California Chronicle, Vol. 2 (August, 1899). Reprinted with slight variations under the title, "Consciousness and Experience," it appears in John Dewey, The Influence of Darwin on Philosophy (New York, Henry Holt and Co., 1910). Also, Dewey's important essays on "Thought and its Subject Matter" in John Dewey and others, Studies in Logical Theory, Vol. 12 (Chicago, University of Chicago Press, 1903); and "Some Stages of Logical Thought,"

In the psychological writings, we found Dewey developing the concept of organic continuity of experience, of its disruptions, and the need to restore or reconstitute it. Experience is viewed, then, as continuous and capable of expansion; however, the function of thinking in the reconstitution of human experience was not specifically treated.

Dewey saw the critical role of thought and made his essays on logic studies of the nature of effective thinking. His analyses were made continuous with his earlier treatment of the biological and psychological phases of experience.

The early article, "Psychology and Philosophic Method," set the stage for the transition from psychology to logic. He began by clarifying the division of labor between biology and psychology. Both are concerned with experience. Biologists and physical scientists deal with the content of experience, with what might be experienced. The psychologist has the same experience that zoologists, geologists, chemists, mathematicians, and historians deal with, but the psychologist has a special kind of inquiry as his task.

> What characterizes his specialty is not some data or existences which he may call uniquely his own but the problem raised -- the problem of the course of experiencing as such as distinct from its special contents.[23]

Philosophical Review, Vol. 9 (September, 1900), pp. 465-489. Reprinted in Essays In Experimental Logic (1916), pp. 183-219.

Being first and foremost concerned with the workings of experience, he is

> really after the process of experience, the way in which it arises and behaves. He wants to know its course, its history, its laws; its various typical forms; how each originates; how it is related to others; the part it plays in maintaining the inclusive, expanding, connected whole of experience.[24]

His problem as psychologist is to learn its modus operandi, its method.

Dewey then underscored a point he had made in the "Reflex Arc" essay. The primary concern of the psychologist is experience, but he cannot deal with it directly. He needs tools, and the tools he creates are states of consciousness.

> I conceive that states of consciousness (and I hope you will take the term broadly enough to cover all the specific data of psychology) have no existence "as such"....before the psychologist begins to work. He brings them into existence. In asking a certain question, he operates to secure the media of answering it, and this medium is "consciousness" as the psychologist treats it.[25]

Just as stimulus and response in the reflex arc were defined as having no independent existence, so states of consciousness are seen as methodological products for the purpose of psychological analysis.

Acts of perceiving, remembering, intending, and loving constitute the actual stuff of experience. In trying to

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23. Dewey, "Psychology and Philosophic Method," p. 169.

24. Ibid., p. 164.

25. Ibid., pp. 163-165.

understand these experiences, the conditions under which they arise, and the effects they produce, the psychologist analyzes and categorizes these into states of consciousness. But to mistake the psychologist's abstractions for the actual experience of another person is the "psychological fallacy": "the confusion of experience of the one experiencing with what the psychologist makes out of it with his reflective analysis."[26]

Psychology tries to understand the expanding, connected whole of experience. Experience itself consists of the complex of events in the life activity of human beings. Psychology's task, as Dewey saw it, was to study "how experience becomes here and now in some uniquely individualized life."[27]

This had important consequences for education. We note in passing that they bore directly on his argument that subject matter had to be "psychologized." The abstractions and generalizations in subject matter represent efforts to order and make generalizations about aspects of experience. But, he argued, "geometry, geography, history never had any existence except in somebody's consciousness."[28] Those who do the logical ordering must realize that the meanings in subject matter only get back into experience when they enter the experience of a specific individual child and are put to work in his life. The educational fallacy might be conceived as a counterpart of the psychological fallacy. It would involve the error of assuming that abstractions could be inserted whole into another person. Actually, they had to enter the stream of experience in each child's life. Educational psychology had to understand the processes by which abstract meanings can become functioning parts of the child's experience. This was to "psychologize" subject matter.

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[26] Ibid., p. 165.

[27] Ibid., p. 179.

[28] Dewey, Lectures for the First Course in Pedagogy, No. 3, p. 4.

One aspect of the functioning of experience is "thinking." Dewey treated this specifically in Studies in Logical Theory (1903). There is obvious continuity between his approach to logic as the analysis of effective thought and his work in psychology.[29]

Dewey maintained that the whole significance of evolutionary method in biology and social history is that it has caused us to see all aspects of life -- organic structure, behavior, institutions as instruments for adjusting to particular environmental situations. The meaning of each can be understood only in terms of its role in meeting specific conditions. Psychology, which may be seen as the study of the natural history of the processes through which experience passes, is indispensable to logic, when logical theory is treated as an account of thinking as a mode of adaptation.

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[29] In an enthusiastic review of the studies by William James -- "The Chicago School," Psychological Bulletin, Vol. 1, No. 1 (January, 1904) -- James acknowledges that Dewey's work in psychology led to the Studies in Logic. We have already seen how, in turn, James's organismic approach to psychology acted as a "ferment" in Dewey's thought. He pays tribute to James in the preface to the Studies.

Jane Dewey, in the biography of her father, says that Angell's functional psychology "played a part developing the logical theories of Dewey and in making a bridge from his logical to his moral theory." (Schilpp, ed. op. cit. p. 32.)

The occasion for thinking occurs when the flow of experience is disrupted. Thinking is a way of removing obstacles and reconstituting experience. "Thinking is a kind of activity which we perform at specific need, just as at other needs we engage in other sorts of activity; as converse with a friend; draw a plan for a house; take a walk; eat a dinner...etc."[30] It busies itself with some difficulty in the universe of action, resolves it, and enters into further experience.

He maintains that there is continuity between the thinking of the plain man and the more sophisticated methods of scientific inquiry. Each is controlled by practical difficulties; each is attempting to solve problems; each then moves on to other spheres of experience. There are no limits to the material of thought. Whether it be the plain man or the scientist:

> He knows no two fixed worlds -- reality on one side and mere subjective ideas on the other....He assumes uninterrupted, free, and fluid passage from ordinary experience to abstract thinking, from thought to fact,

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30. Dewey, Studies in Logical Theory, pp. 2-3.

> from things to theories, and back again. Observation passes into development of hypothesis; deductive methods pass to use in description of the particular; inference passes into action with no sense of difficulty save those found in the particular task in question. The fundamental assumption is *continuity* in and of experience.[31]

The test of effective thinking is whether it leads to the resolution of difficulties. Ideas and processes of thinking are to be instruments for reconstructing the unity of experience. With this in mind, a study of the conditions when thinking is effective or ineffective is a major part of the subject matter of logic. Logical theory, for Dewey, is critical reflection upon thought itself. It includes study of the genesis of thinking in human experience and the evolution of those modes of thought which have best served or hindered man's growth. The Chicago decade was a period of creative activity when pivotal concepts in Dewey's instrumentalism were coming to life. From the rationale then emerging he tried to generate ideas to direct educational practice which could be tested in the Laboratory School.

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[31] *Ibid.*, p. 10. (Dewey's italics.)

CHAPTER VII

THE LABORATORY SCHOOL IDEA

We have seen that the critical problem for Dewey was to understand the processes in the evolution of mind and experience. His goal was to formulate a unified theory that would avoid traditional dualisms. He became convinced that within the evolutionary frame of reference, broadly conceived, such a unity could be found.

The problem of growth of experience was significant at two levels: in the emergence of the civilized experience of mankind and in the life of each child who would be born and come to maturity in the world. Education provided the setting for bringing these two together.

In his _Plan of Organization of the University Primary School_ in 1896,[1] he stated his conception of the basic educational task in the opening paragraph:

> The ultimate problem of all education is to coordinate the psychological and social factors. The psychological requires that the individual have the free use of all his personal powers; and, therefore, must be so individually studied as to have the laws of his own structure regarded. The sociological factor requires that the individual become acquainted with the social environment in which he lives, in all its important relations, and be disciplined to regard these relationships in his own activities. The coordination demands, therefore, that the child be capable of expressing _himself_, but in such a way as to realize _social_ ends.[2]

Dewey was prepared to found a school designed to work on the educational problem thus defined. Since it was conceived as a laboratory school, its specific practical problem needed to be defined. On various occasions, he framed its problems somewhat differently, but the definition which he provided in the ninth monograph is representative, comprehensive, and carefully considered:

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[1] John Dewey, _Plan of Organization of the University Primary School_. Unpublished, University of Chicago, 1895?

[2] _Ibid_., p. 1. (Dewey's italics.)

> In its practical aspect, this laboratory problem takes the form of the construction of a course of study which harmonizes with the natural history of the growth of the child in capacity and experience. The question is the selection of the kind, variety, and due proportion of subjects, answering most definitely to the dominant needs and powers of a given period of growth, and of those modes of presentation that will cause the selected material to enter vitally into growth...We cannot admit too freely the limits of our knowledge and the depth of our ignorance on these matters.[3]

This makes clear again that his definition of the educational problem is concerned with how to bring together two aspects of the growth of mind or experience.

On the one hand, there is the evolution of the experience of the human race. Gradually the skills of more effective thinking (or minded behavior) emerged as man dealt with the challenges posed by nature and complex social realities. Included are the products of mind: artifacts, inventions, and technical skills; institutions and values; and the whole range of knowledge and meanings about the world accumulated in the various subject matters. This side is critically important. It contains the wealth of experience without which the attainment of mature humaneness is impossible; it contains the ingredients upon which growth of experience, individually or socially, is dependent. Scientists and scholars work arduously to organize and extend knowledge. Educators properly focus on the problem of how to organize it for instruction. But Dewey never ceased pointing out a danger involved -- the danger that the abstractions will remain, in Whitehead's terms, "inert knowledge." While concentrating on how to organize, divide, and cover the content of knowledge, one may make the mistaken assumption that this, of itself, will assure that learning will automatically be absorbed in the lives of the students.

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[3] Dewey, "The Psychology of the Elementary Curriculum," p. 222.

This leads to the other side of the educational problem. Experience is existentially real only in the lives of specific human beings. The problem for education is how to organize the meanings, the insights, the habits of mind into a functional pattern that would eventually become a part of the life and character of each student. Dewey wrestled constantly with the question of how to relate the logical and the psychological; the curriculum and the child.[4] He never stopped opposing educational approaches that pitted the two elements against each other in an either/or fashion.

In turning from his psychological-philosophical theory to the practical problems of education, he had to come up with concepts and hypotheses that were more specifically pedagogical in nature. Two examples of these were:(1) his treatment of interest, and(2) his ideas about the stages of development in child growth. Before examining how these fit into his plan, a side comment is in order.

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[4] See, for example, John Dewey, The Child and the Curriculum (Chicago, University of Chicago Press, 1902); and his re-write of it in Experience and Education (New York, The Macmillan Co., 1954).

It would be poor history to picture the ideas that Dewey projected for his Laboratory School as arising de novo, full-blown from his head. Dewey was deeply immersed in the history of educational thought and in the vital educational movements of his time. He was stimulated and influenced by the ideas of others and borrowed and adapted as he saw fit. He had great admiration for the Plato of the early dialogues and knew well the work of educational reformers such as Rousseau, Pestalozzi, Froebel, and Spencer. His involvement in the contemporary educational scene is illustrated by the fact that he was one of the sponsors of the Illinois Child Study Association. He was also on the Executive Board of the Herbart Society and a participant in its publications and meetings. Charles De Garmo and the McMurry brothers, leaders in American Herbartianism, were brought into his Department as visiting lecturers. The Herbartian movement was a dynamic force in educational thought of the time. Its leaders had studied in Germany; they helped define the dynamic educational concerns of the period. They sponsored studies on child development and how to use interest in educational practice.

Major attention was given to the question of correlation: how to correlate studies with the stages of child growth, how to formulate unifying principles that would give direction to the sequence of studies, relate studies to each other, and provide greater internal coherence. The Herbartians were intrigued with various uses of the culture-epoch theory and with its role in building ethical character. Their forums for study were characterized by a generous spirit in which free debate with a minimum of rancor prevailed.[5]

It is a matter of record that ideas like these, in the air at the time, constituted the kinds of problems to which Dewey directed attention. Herbartian features appear in the program of his school. However, because he insisted on searching for the educational implications of the psychological-philosophical theory he was constructing, Dewey worked out answers that had the stamp of his own distinctive orientation. A surface similarity in Dewey's terminology and that of the Herbartians is far from indicating a neat congruence. He learned from them, but he also was discriminating in what he adopted or rejected.

The concept of interest is a case in point. A good deal of attention was being paid to interest in educational reform movements. The child had been rediscovered in the writings of Rousseau, Pestalozzi, and Froebel. The Herbartians and G. Stanley Hall, with his child study efforts, had given additional impetus to the role of interest in educating children. Dewey took up the subject in some memorable articles but again insisted on his own interpretation.

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[5] See, for example, Publications of the Herbart Society (1895-1900) (Chicago, University of Chicago Press, 1908).

In "The Psychological Aspect of the School Curriculum"[6] in 1897, Dewey stated that "the crying evil in instruction today is that the subject matter of the curriculum, both as a whole and in its various stages, is selected and determined on the objective or logical basis instead of on the psychological." Here he was concentrating his fire, in familiar fashion, on the overly formal, routine coverage of material.

Searching for an alternative that would be more sound psychologically, he wanted to employ a concept of interest and an organization of school work appropriate to several stages in the growth of children. Both of these ideas were current in Herbartian circles. In an article for the Herbartian Society in 1895, "Interest as Related to [the Training of the] Will," and in an amplification of it in Interest and Effort in Education[7] some years later, he set forth some of his major pedagogical principles. The "Reflex Arc" essay may be seen as one landmark in American psychological-philosophical development. Dewey's analysis of the role of interest and activity were related in content -- comparable in influence in education.

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[6] John Dewey, "The Psychological Aspect of the School Curriculum," Educational Review, Vol. 13 (April, 1897), pp.356-369.

[7] John Dewey, "Interest as Related to [the Training of the] Will," Second supplement to the Herbart Yearbook for 1895 in Publications of the National Herbart Society(1895-1900) (Chicago, University of Chicago Press, 1908), pp. 5-34. Also, John Dewey, Interest and Effort in Education (Boston, Houghton Mifflin Co., 1913).

In the 1897 article, Dewey made note of the current popularity of the role of interest in education; he criticized several theories of interest and then clarified his own view which treated interest as related to will, effort, and discipline. He was critical, for example, of positions that state the issue in terms of interest _or_ effort. This, he said, is characteristic of a faculty psychology approach which argues that the will is trained when one is forced to exert an effort to do necessary life tasks; the use of interest merely serves to divert the child from the tasks of intellectual discipline. Equally futile is a compromise approach of trying to sugar-coat routine material with tricky little motivational methods. They are deceptions and, as such, cannot lead to genuine results. He also found the Herbartian concept of interest faulty. The basic weakness in Herbartian psychology is its habit of giving ideas a kind of existence of their own. Interest emerges as a product of the action and reaction of ideas in the apperceptive mass. Interest is a feeling of pleasure that results at the junction of a new and old idea.

Both of the psychologies criticized exemplified the "psychological fallacy" discussed earlier. Items like will, effort, and interest, which are products of psychological analysis, are transformed into independent entities. They are products of psychological analysis that are mistaken for the actual content of experience.

Dewey proceeded to give his own definition of interest, its origins, and its applications in educational practice. Interest was described as arising from the activities of human organisms interacting with their world. The primitive condition of spontaneous activity is the source of *natural interest*. If men are awake at all, they have needs to be met and are interested in moving in one direction rather than another. They seize on objects to satisfy needs. At this level, action is *direct* and immediate. There is no gap between ends and means. Dewey offered play as an illustration. In play, doing and enjoying come together and there is no demand for goals beyond them.

But not all ends have this direct and immediate quality. It is when men pursue goals requiring more elaborate means, that interests of an *indirect* variety may appear. When a child aspires to play songs that intrigue him, but are beyond his level of skill, he may develop an interest in the mastery of techniques that would have bored him before.

Fundamentally, then, genuine interest, in its direct or indirect (long-range) aspect, occurs when a person has identified himself with a certain course of action and with the objects or skills that are necessary to achieve a desired goal.

Effort is related to interest. Effort, as we recall from "The Psychology of Effort," is seen as arising in a tensional state; a state that arises with awareness of opposition between an end or ideal desired and the present situation. Effort involves the transformation of the present state in order to realize an ideal.

Ideals or ends grow out of the behavior of the person; they function as motives inducing activity or effort. But sometimes the self is in conflict between a choice of ends or ideals.

> The agent has two possible ends before him, one corresponding to one set of his active powers, and another to another set of impulses or habits. Thought, reflection is not focussed, accordingly, in any single direction. The self has not yet found itself....It is in process of tentative self-expression, first trying on one self and then another to see how they fit. The attainment of a single purpose or the defining of one final ideal indicates the self has found its unity of expression. ....The ideal has become a motive....
>
> Normal effort is precisely this self-realizing tendency of the ideal....The empty or formal ideal is the end which is not suggested by, or does not grow out of, the agent's active powers. ....whenever the ideal is really a projection or translation of self-expression, it must strive to assert itself. It must persist through obstacles, and endeavor to transform obstacles into means of its own realization.[8]

Persistence in thinking through the steps required to overcome obstacles, securing the behavior and skills needed to achieve goals, however remote and difficult, is the ground in which discipline and will are engendered. Genuine interest is involved when the self is in the process of realizing itself.

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[8] Dewey, "Interest as Related to [the Training of the] Will," pp. 23-24.

This conception, he said, distinguishes his position from an approach to interest as indulgence of the whims of children. There are natural interests on the part of the child, due in part to the stage of development at which he has arrived, in part to his previous habits, and to his environment. They relate to his important personal goals. But they are not to be taken as final or as a standard to define the ends of the teacher. For a teacher to view them as such is to make him an enemy of genuine interests.

> The significance of interest is in what it leads to; the new experiences it makes possible, the new powers it tends to form. The value of the teacher is precisely that with wider knowledge and experience he may see [children], not only as beginners but also in their... possibilities, that is, in their ideals.[9]

The broader human ideals or ends to which children may be directed are contained in subject matters -- "in the knowledge of history, science, and the resources of art."[10] The art of teaching involves being sensitive to the child's interests and goals and being imaginative in knowing how to direct him to the deeper meanings and insights of social ideals.

> This utilizing of interest and habits to make of it something fuller, wider, something more refined and under better control might be defined as the teacher's whole duty. And the teacher who always utilizes interest will never merely indulge it. Interest in its reality is a moving thing, a thing of growth,

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[9] Ibid., p. 30. (Dewey's italics.)

[10] Ibid., p. 31.

> of richer experience, and fuller power. Just how to use interest to secure growth in knowledge and efficiency is what defines the master teacher.[11]

He concluded by saying that this essay was not the place to answer the question of how to do it. He was busy at the time of its publication with details of the Elementary School where he would try to demonstrate the answer he had in mind.

It is not a common practice for educational theorists to establish schools in which to test their ideas. In Dewey's case, it meant that the analysis of psychological concepts consistent with the interactionist, organismic theory he was developing, had to be translated into more specific ideas for pedagogical purposes.

Since he had argued that a critical educational problem of the time was to "psychologize subject matter" in a manner consistent with his concept of interest, we may follow what happened to this idea as it was readied for school practice. His later essay, Interest and Effort in Education, includes elaborations which reflect the experience Dewey had in the Laboratory School. If the concepts of interest and activity were to be given a critical role toward the end of expanding and enriching mind and experience, clear distinctions had to be made as to when their employment would be educative.

As we have seen, his position by this time was grounded in the proposition that the fundamental condition which gives rise to human learning is in the experience of the organism interacting with its world. His psychological and logical theory extended this to characterize intellectual or reflective behavior as special, more refined behavior within the act. Human beings have needs, ends, ideals, they are seeking to realize; obstacles have to be overcome to reach the ends. The emergence of conceptual behavior in processes of thinking provides a better means to function more effectively -- to reconstruct, extend, and enrich experience. This was the alternative to the dualistic view of mental life as the special property of a separate, abstract mind. Thinking is described as growing out of the concrete specific stuff of life experience itself; its abstractions become tools for ordering things and coping with the world. Abstract ideas also change the world and hence pose new problems with which thinking then has to come to terms. To equip human beings with the intellectual tools and meanings that have emerged in civilized experience *so that they will be genuinely incorporated into the self and life behavior* of each individual was the great task of education.

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[11] Ibid.

It was from this frame of reference that Dewey sought to make his discriminations about the use of interest and activity, to define when they were justified educationally, and to create a scheme for incorporating them into a school program.

In the 1913 revision of his earlier essay on interest, Dewey said that the idea of "self-activity" had become by then a popular educational ideal -- so popular that it had deteriorated to a barren cliché with little observable relation to practice. To recover it from this familiar fate, it had to be defined more sharply as "all the doings that involve growth of power -- especially of power to realize the meaning of what is done."[12] The essence of an educative activity or experience is not just doing or engaging in any old activity. An experience is educative only when it leads to the seeing of new meanings about the world or self, which are then incorporated so as to help one live more effectively.

This rules out actions performed under coercion, for these have no personal significance for the person coerced. It excludes random reactions or mere excitations and mere mechanical or routine performance, for these fail to carry into a broadening of experience. Unfortunately, Dewey said, "self-activity" is often mistaken for freedom from restraint and license to do as one pleases.

The kinds of interest and activity that may be classified as truly educative vary with the age of students, with their native endowments, and with their prior experiences and social opportunities. In spite of the variables that these introduce, some cataloguing of them is possible. He outlines three levels of interest and activity. The levels correspond roughly to stages in the growth of children; and (as we shall see) to stages in the evolution of civilized experience. They correspond to a pivotal idea he used for organizing work in the Laboratory School.[13]

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[12] John Dewey, Interest and Effort in Education (Boston, Houghton Mifflin Co., 1913), p. 66. (Dewey's italics.)

(1) For the infant and the pre-school child the first learnings involve proper use of the organs of sense -- the eye, ear, hands, etc. -- and physical coordinations. The sensory-motor aspects come first but even here they are not sharply marked off from mental life. The child finds out that there are certain consequences that derive from coordinating eye movements and reaching out with the hands. He can reach, touch, and feel objects which then have come within the range of his experience. The joy that comes to the child when he extends his range of control during the first two years is familiar to every parent.

The tendency of a long tradition in education, which conceived of education in purely intellectual terms as mind training, was to make an abrupt break with the sensory-motor aspects when the child entered school. Dewey, who argued for the continuity of the intellectual with physical and sensory aspects, held this kind of break to be mistaken pedagogy.

Other movements in educational history also had recognized the mistake and introduced materials for self-expression, but they were inadequate because they stemmed from inadequate psychologies. The formal, verbal approach had been challenged by the object lessons of the followers of Pestalozzi. But here the assumption was that the senses were gates to the mind and that the sheer presentation of sensory objects led to knowledge. Dewey, on the other hand, maintained that sound and touch are not important in their mere reception but as they are coordinated to help secure intelligent control.

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[13] Dewey, Interest and Effort in Education, pp. 65-88.

Froebel tried reform by introducing play and constructive, manipulative activities. He sensed that bodily activities were related to growth of mind. The methods were spoiled, however, by their relation to a romantic spirituality which saw various forms of play as symbolic aspects of the unfolding of the Absolute. This led to rigid and artificial techniques in arrangement of materials to accord with supposed principles of symbolism.

(2) A second and higher form of activity follows the stage of direct sensory and motor behavior of the infant. As the child grows, the materials he encounters and uses expands in range. He can extend his control, for example, by the use of tools. A child can use a saw, or a needle and thread to secure ends not available to an infant; such tools require mastery of new skills and coordinations. This, in turn, makes possible new levels of development. "*The discovery and use of extra-organic tools has made possible,*

both in the history of the race and of the individual, complicated activities of a long duration."[14] The combination of more remote, delayed goals together with the need to develop skills to utilize more complicated tools and techniques leads to the increased use and development of intelligence. In the life of children, simple play gets transformed into more elaborate games and work. In games, rules must be mastered. Or, when a child shifts from "playing boat" to making one, he must bring to bear new intellectual skills needed to regulate a series of acts. Play thus gives way to work which "covers all forms of expression and construction with tools and materials, all forms of artistic and manual activity so far as they involve the conscious or thoughtful endeavor to achieve an end."[15] Later they include, for example, the sequence of acts required to execute scientific experiments. Creative work is thus distinguished from drudgery in which activities are performed in the absence of personal, intrinsic motivation.

(3) The transition to the intellectual brings us to a third level. The intellectual interest in discovering new things, in wrestling with and examining ideas, may become an interest in itself -- and will normally take place, Dewey held, if interest in learning is not killed at earlier stages.

> Planning ahead, taking notice of what happens, relating this to what is attempted, are part of

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[14] Ibid., pp. 75-76. (Dewey's italics.)

[15] Ibid., p. 81.

> all intelligent or purposeful activities. It is the business of education to see that the conditions of expression of the practical interests are such as to encourage the developing of these intellectual phases of an activity, and thereby evoke a gradual transition to the theoretical type.[16]

When work with tools, in gardening and cooking, for instance, is carried on under intelligent direction, the skilled teacher will see opportunities to shift interest from mere practical concerns to experimentation for the sake of discovery. At this point, where interest is occupied with inquiry and discovery, the intellectual level has been achieved.

Dewey made this elaborate analysis of interest, effort, and activity to underscore two points for educational theory: (1) To show that the intellectual is not an internal matter of an abstract mind, but grows out of organic and personal doing, acting, and striving, and (2) to attack the idea of subject matter as external, "as something complete in its ready-made and fixed separateness,"[17] that is to be learned by simple presentation. In his conception, the facts and truths of geography, history, and science are seen as means and ends for the intelligent development of experience.

He warned that the doctrine of interest offered no easy short cuts for education. Nor should elaborate means be used to secure "interested children" as an end in itself. Interest, like happiness, he said, is best attained when least consciously pursued. The job of educators is to provide the materials, the ideas, and programs that will engage children in exploring and inquiring. If we can discover the urgent needs, habits, and powers and

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[16] *Ibid.*, pp. 82-83.

[17] *Ibid.*, p. 94.

> if we can supply an environment of materials, appliances and resources -- physical, social, and intellectual -- to direct their adequate operation, we shall not have to think about interest. It will take care of itself.... The problem of educators, teachers, parents, the state, is to provide the environment that induces educative or developing activities, and where these are found the one thing needful in education is secured.[18]

This analysis of activity, interest, and thinking had important bearings for the hypotheses used in the school and for the later progressive education movement. We shall be referring to these as the story unfolds.

One point may be underscored here. Behind the essays on interest there were ideas much more basic to the Deweyan philosophy than the topic of interest itself. A fundamental conception of the nature of knowledge and its origin was involved. Dewey concentrated in the essay on the emergence of successively higher levels of interest, effort, and thought processes in the life of children. The idea of this kind of progression was rooted in his evolutionary-organic theory that these levels corresponded roughly to critical stages in the development of civilized experience at large.

Primitive life was characterized by more direct, impulsive activities with sensory and motor behavior predominant.

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[18] *Ibid.*, p. 96.

Pursuit of remote, postponed ends was not highly developed.

The introduction of new materials, such as bronze and iron, and the invention of more elaborate techniques and tools opened new possibilities of experience and required more complex human efforts. These were eventually accompanied by more elaborate institutions and geographical explorations, all of which contributed to the refining of intellectual life. The drive for knowledge eventually produced the sciences where inquiry and learning facilitated greater control and became ends in themselves.

Again this idea was not unique with Dewey. It was part of the general interest in evolutionary theory on the Chicago campus. George Mead, for example, was teaching a course on "The Philosophy of Evolution." A detailed reflection of the idea can also be found in the influential work of Dewey's sociologist colleague W. I. Thomas, Source Book for Social Origins. Thomas said that the study of savage and prehistoric man is one of the most fascinating and important of the social sciences. Beyond being delightful, he considered such studies to have vital, though unrealized, relation to historical, sociological, and pedagogical studies.[19]

Thomas suggested a concept to which all activity could be related -- the concept of control. Control, he said, is the object of all purposeful activity. The whole design of nature is to maintain life. Individual and social activity at its basic level is concerned with securing nourishment and producing offspring -- food and reproduction are the primal necessities. Control can be applied to stages of organic and social development.

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[19] William Isaac Thomas, Source Book for Social Origins (Chicago, University of Chicago Press, 1909), p. vii.

The animal, because of its power of motion, has superior control over plant life. It can go after food rather than merely wait for it. This helps explain the organs of sense and prehension. In man, control is extended by his use of animals, means of mechanical transportation, and the employment of weapons and tools. Gregarious tendencies lead to social life which makes man's existence more secure through cooperation. Language, a product of society introduces a critical difference in increasing control, because through it knowledge, tradition, ideals, etc., are transmitted and increased. Social institutions secure regulation from within and protect against enemies from without. Finally:

> ....the human mind is pre-eminently the organ of manipulation of adjustment, of control. It operates through what we call knowledge. This in turn is based on memory and the ability to compare a present situation with similar situations in the past and to revise our judgments and actions in view of the past experience. By this means the world at large is controlled more successfully as time goes on. Knowledge thus becomes the great force in control, and those societies are most successful and prosperous in which the knowledge is most disseminated, most reliable, most intensive. This is the sense in which knowledge is power.20

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20. Ibid., pp. 15-16.

This sociological-historical point of view obviously fitted Dewey's organic psychological-logical theory as glove to hand. Thomas was one of Dewey's consultants for the Laboratory School. The whole rationale of the curriculum was centered around themes in this orientation. Dewey's most arduous effort in education was to effect a unity between the development of the mind of the child and the human mind at large, as represented in the subject matter. With the ideas just presented, the principle seems to have been found.

CHAPTER VIII

THE SEQUENCY OF CHILD GROWTH AND THE EDUCATIONAL PROGRAM

The existence of an actual school posed the question of what to do in it. The creation of a psychological-philosophical theory that would contain a unified image of man and that would square with the findings of evolutionary science, had been emerging in Dewey's work in something like the organic sense of which he spoke. His children were born and were growing up in these years. He and Mrs. Dewey had developed an intense interest in education. We know that Mrs. Dewey had a quick intelligence and shared her husband's interest in philosophy. In addition, her keen concern with social questions was responsible in part, for shifting Dewey's attention from the purely intellectual activities of his early Hegelian period to an interest in problems of social significance. It is fair to conjecture that while Dewey and Mead were engaged in the intensely exciting effort to map out new theoretical ground, the question of what the new ideas might mean for a more vital education for children was a matter of lively discussion at home as well as on campus.[1] In any case, by the time the school opened in 1896, Dewey had ready in his mind the outlines of a rationale from which the school's program would take its lead in the eight years of his leadership. Dewey, himself, as he once stated in a letter to Harper, took the responsibility for supervising "the selection of the subject matter for the school and insuring the proper correlations; and....to set forth the general philosophy or general theory of its movement."[2] The school's staff was given a great deal of freedom in working out the details and in trying and testing ideas.[3]

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[1] Jane M. Dewey, "Biography of John Dewey," in Paul A. Schilpp, ed., The Philosophy of John Dewey, pp. 24-27.

The grip of organic-evolutionary theory had led to his break with major philosophic traditions. Similarly, he found major aspects of traditional educational practice unsound because of inadequate psychological foundations. Educational reformers, sensing the need for revision, had introduced interesting innovations in content and method. Dewey was attracted by many of these but ruled out piecemeal borrowing. He had to try to formulate an educational program that would be an expression of his philosophy. In the latter, he was trying to bring complex concepts from the sciences and the humanities into a new unity. An educational counterpart would require an equally imaginative and ingenious design.

Once again the general problem was to bring together the experience of the individual person and social experience as represented in civilization, in a way that would lead to the enrichment of both. Since the whole program cannot be discussed at once, we shall have to move towards a clarification of the total design by describing specific features one at a time.

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[2] John Dewey, Letters to William Rainey Harper, The President's Papers, University of Chicago (December, 1897).

[3] Jane M. Dewey, op. cit., p. 28.

One goal of the experiment was to construct a course of study that would harmonize with the natural history of the growth of the child -- in terms of his capacities and experiences. The kind of analysis found in the essays on interest and activity provided the conceptual frame for three stages of child growth. Each stage was to be accompanied by a different emphasis in subject matter. The Laboratory School was to conceive of the mind as:

> ....a growing affair, and hence as essentially changing, presenting distinctive phases of capacity and interests at different periods. These are all one and the same in the sense of continuity of life, but all different in that each has its own distinctive claims and offices. "First the blade, then the ear, and then the full corn in the ear."[4]

Rough age ranges were assigned to these with the warning that they were not to be adhered to in a rigid sense (there were, for example, periods of transition between the stages): stage I, ages 4 to 8 or 81/2; stage II, ages 81/2 to 101/2 or 11; stage III, ages 11 to 14 or 15. The characteristics of these stages are found in a number of places in the literature of the school.

A. Stage One

In the first stage, the child has direct personal and social interests; there is a direct relation between impulses, ideas, and action. He has a strong need to express himself in motor and expressive activities, in manipulation, investigation, and oral communication. While the child is interested in exploring his world with all his sensory equipment, longer range goals requiring delayed achievement and mastery of technical skills are not characteristic of this stage. Such activities as play, games, occupations, story telling, and informal conversations were held to be appropriate for this age group. These gave the child a growing command of methods of inquiry and experimental action at an elementary level.

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[4] John Dewey, "The Psychology of the Elementary Curriculum," The Elementary School Record, Vol. 1, No. 9(December,1900), p.225.

Dewey described, in the school's first year, several emphases in the program for four to six year olds.[5]

(1) The goal was to grade the work to individual pupils rather than to place children rigidly according to grade. Children varying in age by two or three years were placed together in situations that would involve older children reading and working with younger ones. Instead of reciting to a teacher, it was hoped that the chance to communicate freely about experiences would lead to more stimulating intellectual interchange. It was based on the assumption, too, that children teaching each other constituted a valuable and natural resource that should be utilized. This technique was employed throughout the school.

(2) In order to avoid the isolation of studies in the early years, they were treated as "factors in child-life."

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[5] John Dewey, "A Pedagogical Experiment," Kindergarten Magazine, Vol. 8 (June, 1896), pp. 739-741.

Nature study, manual training, and sewing, for example, were considered extensions into the school of things that the child does outside. The more formal studies were to be grouped around kinds of activities natural to the child and, as far as possible, were to be evolved from them. Initiation to number work, for example, grew out of the measuring and weighing needed in these activities or occupations.

B. Stage Two

In the second period, from eight or nine to eleven or twelve, the child developed a need to secure clearer, more long range goals. The new objectives required mastery of more complex skills.

Several consequences for the educational program resulted. In terms of the content of study, the general unity of experience of the first stage began to move toward differentiated studies. Just as mankind was forced to develop more specialized methods of thought and action in order to achieve desired ends, so the child should be taught to realize the need of increasing his powers by learning more disciplined and refined skills.

The subject matter was planned to help build such attitudes. One objective was to help children see that because they faced more complex challenges, men developed more effective social cooperation and social institutions.

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This principle affected the approach to history and science. Instead of studying history chronologically, units (the term was not used yet) were selected to illustrate the principle of human behavior required to attain better control. Features in the colonizing period of American history seemed apt for this purpose. Study centered around events in the exploration of Chicago and the Mississippi Valley, and of Virginia, New England, and New York. Children were to be led to see how people had to react when confronting new geographical, climatic, and social situations; to see how the total environment presented both obstacles and new sources of help. The colonists needed moral qualities of patience and courage. They experienced different consequences depending on the levels of ingenuity, insight, and judgment they brought to situations. The pedagogical principle was to organize study around pivotal concepts rather than just "covering ground" or "going over" abstract material which, in Dewey's eyes, was so wasteful.

Methodologically, continuity was maintained with the motor-expressive features of the first period. Instead of the classroom being a bare place with rows of seats facing a teacher, a blackboard, and an American flag, new kinds of materials were introduced -- tools, household utensils, foods, etc. -- that applied to the modes of living of the explorers and colonists under study. Children could reproduce and get "the feel" of conditions they discussed rather than just talking about historic information. This was supplemented by the innovation of dramatic reenactments. Through this device, children took over the roles of people in history as they confronted problems presented by the teacher or other children. Role playing in problematic situations was one method used to move educational experiences to a new level of intellectual involvement.[6]

In science, the same principles prevailed: (1) using the concept of control -- or adaptation of means to ends and (2) beginning the differentiation of subject matter, this time dividing science into its geographical and experimental aspects. Yet work in science was related to historical studies. The American colonists had confronted the challenges of a new natural environment. The children studied the physiographical patterns of mountains, rivers, plains, flora, and fauna of each colonial area. They were taken on field excursions and were given materials to reproduce situations from more remote times. In the experimental aspect of science, children were seen to be in a transition stage between the early level, when they explored materials directly, and the later secondary stage when the intellectual interest in discovering facts and verifying principles would emerge. In this middle period,

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6. George H. Mead's analyses of the educative value of play and the nature of role-playing and thinking in the act are evident in such features. See, for example, George H. Mead, "The Relation of Play to Education," University Record, Vol. 1., No. 8 (May, 1896), pp. 141-145.

more practical interests still prevailed so the stress was on applied science. The rather crude methods used by the colonists to meet the basic needs of living were studied to see life situations in which elementary principles of chemistry and physics were employed. By having the children engage in the processes of bleaching, dyeing, soap and candlemaking, they were introduced to the chemical properties of oils, fats, acids, and the like. The use and transfer of energy in spinning wheels and looms were studied, together with mechanical principles involved in locks and scales, for example. Such efforts show a concern for the problem of correlating intellectual understanding with activities involved in producing basic necessities.

An additional responsibility was assigned to this second stage: systematic teaching of the three R's. The case for their inclusion follows from the rationale that has been developed. The pursuit of more complex ends, goals, and interests requires mastery of higher level skills. This had been true for man in general, and applies to the child's learning of the three R's. They were accorded great respect.

> These subjects are social in a double sense. They represent the tools which society has evolved in the past as the instruments of its intellectual pursuits. They represent the keys which will unlock to the child the wealth of social capital which lies beyond the possible range of his limited individual experience.[7]

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[7] John Dewey, The School and Society, revised ed. (Chicago, University of Chicago Press, 1923), p. 104.

Dewey criticized the teaching of the three R's in traditional education because it was done so inefficiently, with wasted time and little success. He argued that from sixty to eighty per cent of the time in elementary schools was devoted to drill with results that were widely deplored. This meant that much of the content of elementary education was trivial. Time was given to meaningless and ineffective drill that should have been used to introduce more substantial intellectual content as required by the expansion of knowledge.

Having defined the problem of the three R's in these terms, he offered some hypotheses for remedying it. To overcome waste, two conditions must be provided:

> (1) The need that the child shall have in his own personal and vital experience a varied background of contact and acquaintance with realities, social and physical. This is necessary to prevent symbols from becoming a purely second-hand and conventional substitute for reality. (2) The need that the more ordinary, direct and personal experience of the child shall furnish problems, motives, and interests that necessitate recourse to books for their solution, satisfaction, and pursuit. Otherwise, the child approaches the book without intellectual hunger, without alertness, without a questioning attitude....[8]

In terms of program, the school was to introduce the use of direct observation, activities requiring construction, and experimentation instead of the traditional recitation. The objective was to present these in a manner and sequence so that the child would feel the need to gain command of the traditional tools. He could not operate effectively without being able to read, write, figure, and use his hands with better skill. This, it was hoped, would make the use of the three R's more intellectual than mechanical, and the amount of time spent in drill could be reduced. Dewey did recommend, though, that periodic concentration on studying the skills should be alternated with substantial study. This could happen within a given year or semester, but also greater attention to skills would be given in certain stages of the child's development such as in this second period. This would be an alternative to taking logically organized knowledge and slicing it in equal pieces throughout the entire elementary and secondary program, with long periods of isolated drill offered parallel to it.

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[8] Ibid., pp. 104-105.

C. Stage Three

The third period of the elementary school was the threshold to secondary education. By this time, the child would have had a range of experience with materials and activities that opened his eyes to the possibilities and joys of learning about his world. He would have attained some sense of the origin of learning and its role in human affairs. He would understand that school study dealt with matters of significance, with relations to things he could see in his home and neighborhood and to the larger events beyond. He would have made a good beginning at mastering the tools of thought and methods of inquiry and activity that would enable him to begin more specialized study for technical and intellectual ends.

At the secondary level, just ahead, his interest would take on the adult form, and he would be ready for systematic work in fields such as geography, chemistry, physics, history, mathematics, literature, etc. It was hoped that youth would then see the indispensable value that classified, organized knowledge plays in mature investigations. Now interest would be in inquiry itself, and the motivation to acquire advanced intellectual means would have been established.

Later, we shall examine in more detail Dewey's ideas about secondary education. At this point it may be noted simply that the school, in the fall of 1903, had just taken on a secondary program that might have been integrated with elementary work. To that time, energy had been concentrated on the lower levels and only a few students in the twelve to fifteen age bracket were enrolled. In records on the school, remarks about the program for older children are characteristically brief and tentative. Several sentences in School and Society (1900) are typical:

> While the school has a number of children
> who are in this period (12-15), the school
> has not, of course, been in existence long

> enough so that any typical inferences can be safely drawn. There certainly seems to be reason to hope, however, that with the consciousness of difficulties, needs, and resources gained in the experience of the last five years, children can be brought to and through this period without sacrifice of thoroughness, mental discipline, or command of technical tools of learning, and with a positive enlargement of life, and a wider, freer, and more open outlook upon it.[9]

We have here the theoretical germ for work in secondary education. We may only guess as to how he would have spoken if he had worked in the field another ten years.

Problems of the lower schools occupied Dewey's attention, but his goal was a rationale that would provide a unity of conception from the kindergarten through the university. He did make reference to higher education as the stage of advanced specialization and generalization; specialization to pursue study or training for a life work or profession; generalization, in the sense of seeking to clarify fundamental principles which underly all the various studies and which hold them together.[10]

D. Levels of Development and Culture-Epoch Theory

In proceeding with our task of analyzing Dewey's theory, an observation on the relation of the idea of levels of development to culture-epoch theory is appropriate. Darwinism had sparked a revival in the culture-epoch notion. The idea of "ontogeny recapitulates phylogeny" was a popular phrase on the lips of professors and students alike. The Herbartians, with their interest in child development and their search for unifying principles in education, had come up with new interpretations of this idea.[11] At first glance, Dewey's idea of the parallel ways in which knowledge and stages of thinking arise in the child and in race experience appears to exemplify the idea. A closer look reveals that this is another instance where Dewey was stimulated by the Herbartians but recasted their proposals in terms of his own theory. The First Yearbook of the Herbart Society (1895)[12] contained a number of articles on the culture-epoch topic, including a comprehensive view of a variety of interpretations by Professor C. C. Van Liew. This is, of course, the period in which Dewey was clarifying details for his own school. He was stimulated to write a reply -- "Interpretation of the Culture-Epoch Theory"[13] -- in which he focused on what consequences were expected to follow for educational work. Van Liew's article had maintained: (1) a principle is needed to give correspondence between the child and subject matter, (2) the culture-epoch theory supplies such a principle, and (3) therefore, the cultural products of each epoch will contain material that will appeal most to the child passing through the corresponding stage in his own development.

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[9] *Ibid.*, p. 108.

[10] John Dewey, Lecture Notes on *First Course in Philosophy of Education*, 1896, Ch. 5, p. 7.

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[11] See, for example, chapters in the First Yearbook of the Herbart Society, Charles A. McMurry, ed., Publications of the National Herbart Society (1895-1900) (Chicago, University of Chicago Press, 1908). Especially C. C. Van Liew, "The Educational Theory of the Culture Epochs," Vol. 1 (1895), pp. 85 ff.

Dewey pointed out that an assumption was made that an exact parallelism exists between race history and child development, but that such an exact parallel is confessedly absent. He argued that this meant that attempts first to study epochs in the history of the race and then to transfer what is found to the child is unjustifiable. Educators, he said, must begin by discovering the psychological stages in children. They must first investigate the child. Their knowledge of epochs in man's history then can be used to raise certain questions for pedagogical purposes.

> Since this epoch was passed through by the race, it is possible we shall find its correlate in the child himself. All the racial side can do is to suggest questions. Since this epoch was passed through by the race, it is possible we shall find its correlate in the child. Let us then be on the lookout for it. Do we find it? But the criterion must come back in all cases to the child himself.[14]

Such an approach will remind us, too, that stages that once dominated man's life, such as hunting or nomadic phases, have given way to higher, more complex levels. To devote a year of schooling to hunting or pastoral activities in an urban, industrial age is ridiculous.

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[12] Ibid.

[13] John Dewey, "Interpretation of the Culture-Epoch Theory," Second Yearbook, Charles McMurry, ed., op. cit., pp. 89-95. First published in the Public School Journal, Vol. 15 (January, 1896), pp. 233-236. The former version is used here.

[14] Ibid., p. 91.

He assumed some general correspondence, but questioned the assumption that it is the products of each epoch that are appropriate content for study. The important point of correspondence between the child and race history lay in the psychic conditions which gave rise to the products of the epoch. If there is an "agricultural" interest or instinct in the child, it will not properly be met by secondhand knowledge about agriculture in remote times. The appropriate analogy requires that his interest be fed in the way it was in the race:

> ....by contact with earth and seed and air and sun and all the mighty flux and ebb of life in nature. It requires to be fed by knowledge of how agriculture is now carried on, what its products are, how these reach the market, etc. Then the child may be brought into contact with the historical cultural products, and will have some "apperceptive organs" for them and will be able to use them vitally.[15]

He criticized, too, the suggestions of using literature as the basis for organizing studies. Ziller's school in Leipzig, for instance, had been a notable proponent of such a theory of concentration. There was a literary center for each of the eight years of the Volksschule: (1) epic folklore stories, (2) Robinson Crusoe, (3) history of the Patriarchs, (4) times of the judges, (5) times of the kings in Israel, (6) the life of Jesus, (7) history of the Apostles, and (8) the history of the Reformation and catechism. Dewey said this made literature an artificial entity, divorced from the total social context. It became part of a mystique designed to build moral character. He saw value in literature, in story and myth, to the degree that children are led to see the natural facts and social conditions reflected in them. Misuse results when literary works are considered to provide a kind of direct spiritual baptism into ancient moral values.

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[15] Ibid., pp. 92-93.

In Dewey's analysis and interpretation of the culture-epoch idea, we encounter again his characteristic way of defining the problem of relating the child and the curriculum. He saw twin values that needed to be honored in education: (1) civilizational experience as represented in the subject matter, and (2) the experience of the individual child. He *was* in "revolt against formalism"[16] in his general philosophy and in his educational theory. The problem was how to keep knowledge alive and functioning in the individual lives. He wrestled endlessly to work out ideas in education that would be consistent with the analysis he made of the evolution of levels of activity, interest, and thought. The job of educators was to move children toward the insights, meanings, and methods of thought represented in the content and discipline of the subject matter. But his concept of the evolution of mind and experience ruled out the approach of starting with the end product of adult scholars, slicing it up, and presenting it to immature minds. This would be to violate the continuity of experience of the individual child; it would divorce knowledge itself from the processes which led to it. In the education of human beings, history, science, and literature become subject matters that make a difference in experience only as they

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[16] See Morton White, *Social Thought in America: The Revolt Against Formalism* (Boston, The Beacon Press, 1957).

> ....become a part of what an individual reports, expresses, lives.... [The] subject is a mode of personal experience not simply an ordered collection of facts and principles, the curriculum as a whole, and every study in detail, has a psychological side whose neglect and denial lead to confusion in pedagogic theory; and in educational practice to the dead following of historic precedent and routine, or else to the substitution of the abstract and the formal for the vital and personal.[17]

This meant that he gave a qualified assent to Dr. W. T. Harris's definition of a school subject as:

> ....the gathering up and arranging of the facts and principles relating to some typical aspect of social life, or which affords a fundamental need in maintaining that social life; that the standard for adapting and placing a study is the worth which it has in adapting the pupil to the needs of the civilization into which he is born.[18]

This, he held, is a useful definition of the logical aspect of subject matter, but it ignores the psychological.

> From the psychological standpoint we are concerned with the study as a mode or form of living individual experience. Geography is not only a set of facts and principles which may be classified and discussed by themselves, *it is also a way in which some actual individual feels and thinks the world*. It must be the latter before it can be the former....Only

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[17] Dewey, "The Psychological Aspect of the School Curriculum," pp. 368-369.

[18] *Ibid.*, p. 359.

> when the individual has passed through a certain amount of experience, which he vitally realizes on his own account, is he prepared to take the objective and logical point of view, capable of standing off and analyzing the facts and principles involved.
>
> Now the primary concern in education is beyond question with the subject as a special mode of personal experience, rather than with the subject as a body of wrought out facts and scientifically related principles.[19]

The import of this for educators, he said, is that the first questions in approaching a study are: What is the subject as a form of living, immediate experience? What is the interest or end in that experience? How does it function to give other experiences richness of meaning? These questions must be asked both for all children and with reference to each specific child -- the individual of a certain age, ability, and background.

The genuine course of procedure may be stated as follows:

> We have first to fix attention upon the child to find out what kind of experience is appropriate to him at the particular period selected; to discover, if possible, what it is that constitutes the special feature of the child's experience at this time; and why it is that his experience takes this form rather than another. This means that we observe in detail what experiences have most meaning and value to him, and what attitude he assumes toward them. We search for the point, or focus, of interest in these experiences. We ask where they get their hold upon him and how they make their appeal to him. We endeavor by observation and reflection to see what tastes and powers of the child are active in securing these experiences. We ask what habits are being formed; what ends and aims are being proposed. We inquire what the stimuli are and what responses

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19. Ibid., p. 361. (Author's italics.)

20. Ibid., pp. 364-366.

> the child is making. We ask what impulses are struggling for expression; in what characteristic ways they find an outlet; and what results inure the child through their manifestation....Once more, these phenomena of interest are not final. They do not say to the teacher: We are your final end, and all your energies are to be devoted to cultivating us just as we are. None the less, they are indices and instruments; they are the only clews [sic] which the instructor can possibly have to what experiences are such really, and not simply in name. They reveal the general standpoint from which any subject must be presented in order to lay hold on the child. The problem of the teacher is to read the superficial manifestations over into their underlying sources. Even "bad" interests, like that of destruction, are the signs of some inner power which must be discovered and utilized.
>
> In the second place, in saying that these psychical phenomena afford opportunities, give clews, and furnish leverages, we are virtually saying that they set problems. They need to be interpreted. They have the value of signs, and, like all signs, must be interpreted into the realities for which they stand. Now it is the province of the subject-matter on its logical and objective side to help us in this work of translation. We see the meaning of the beginning through reading it in terms of its outcome; of the crude in terms of the mature.[20]

Dewey accused other theorists of being confused about the real task of educators. This was due to their failure to see clearly the psychological side -- the problem of "psychologizing" subject matter to get it into the student's experience. It is a fair question, however, to ask whether Dewy's effort to resolve the psychological-logical dualism in education led to the reduction or the increase of confusion. We shall turn shortly to an examination of the specific plan he developed in his school to deal with the problem. Another question, though, is what was the effect on progressive educators who followed his lead?

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[20] Ibid., pp. 364-366.

On the one hand, he stressed over and over again the pedagogical importance of starting with the interests, experience, and needs of children -- more specifically, with the concrete interests of each child. On the other hand, he warned against treating these interests as end-points and indulging them. The direction of school work was to lead toward the systematic study of differentiated subject matter at the secondary level and beyond. He stressed also that in the early years of school the expressive-motor activities of the child were keys to developing sound habits of investigation and learning. The movement toward intellectual procedures should come later. In speculating on the consequences for the progressive movement, a historical fact about the Dewey School must be considered. Most of the energy, during the eight years of its existence, was poured into elaborating the theory and program for the early levels -- the stages when the stress was to be on connecting school with immediate interests and activities in the child's home and neighborhood and on beginning with direct, overt motor behavior. In the criticism of traditional education, the bete noire was the method of reciting abstract verbal material. The bad classroom was one where passive, rote learning went on under the coercion of an authoritarian taskmaster. Dewey himself was arguing that mind, as represented in subject matter, was to share honors equally with the mind of the child. The thrust of the "new education," however, tended to cast logical subject matter in the role of villain. Dewey's insistence on the need to start with the child's interests tended to get the lion's share of attention, even though he always quickly followed with the admonition that this should lead toward deeper insights into transitions to the intellectual emphases he advocated for secondary education. The direct, active features of the lower grades tended to be identified as the distinguishing marks of progressive educators.

PART II

THE EDUCATIONAL PROGRAM FOR THE LABORATORY SCHOOL

CHAPTER IX

THE OCCUPATIONS

Some thirty years after Dewey left the school, he reflected again on its theory and practice in a statement, "The Theory of the Chicago Experiment,"[1] in which he said that conceptions for work in the school originated in his philosophical and psychological work -- rather than from educational experience or precedent. This meant that answers to practical questions -- What should be taught? How? In what order? -- had to be answered in terms of the general theory. He refered to his original 1895 *Plan of Organization* to remind us how it defined *the* problem of education:

> ....the harmonizing of individual traits with social ends and values. Education is a difficult process....precisely because it is so extremely difficult to achieve an effective coordination of the factors which proceed from the make-up, the psychological constitution of human beings with the demands and opportunities of the social environment.[2]

The *first* sentence of the *Plan* says simply, "The ultimate problem of all education is to coordinate the psychological and social factors."[3]

This definition of the problem was, he insisted, a distinctive feature of his school and marked it off from many other reform efforts. He said that the emphasis of progressive schools tended to center on the ideal of the harmonious development of all the powers of the individual -- emotional, intellectual, and moral. Progressive schools had underestimated the importance of the social or civilizational: "the emphasis today is so largely upon the instincts and aptitudes of individuals as they may be discovered by purely psychological analysis, that coordination with social purposes is largely ignored."[4] Many public schools, he stated, concentrate on preparing students for individual economic success as if this were the only significant aspect of social life. Still others teach the doctrine of "social adjustment" as if "social" signified only a fitting of the individual into some preordained niche of the particular social arrangements that happen to exist at the time. [5]

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[1] Mayhew and Edwards, *The Dewey School* (New York, D. Appleton-Century Co., 1936), App., II, pp. 463-477. (Written especially for this volume by Dewey.)

[2] *Ibid.*, p. 465.

[3] Dewey, *Plan of Organization of the University Primary School*, p. 1.

In another comment on his original 1895 Plan, he added:

> The controlling aim of the school was not the aim of present progressive education. It was to discover and apply the principles that govern all human development that is truly educative, to utilize the methods by which mankind has collectively and progressively advanced in skill, understanding, and associated life.[6]

In his reflections of the 1930's, he made special note of the social phase of education in the school. He pointed out that it was put first in The Plan.

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[4] Mayhew and Edwards, op. cit., p. 465.

[5] Ibid., p. 466.

[6] Ibid., p. 6 (Dewey's italics.)

> This fact is contrary to an impression about the school which has prevailed since it was founded and which many visitors carried away with them at the time. It is the idea which has played a large part in progressive schools: namely, that they exist in order to give complete liberty to individuals, and that they are and must be "child-centered" in a way which ignores, or at least makes little of, social relationships and responsibilities. In intent, whatever the failures in accomplishment, the school was "community centered." It was held that the *process* of mental development is essentially a social process, a process of participation; traditional psychology was criticized on the ground that it treated the growth of mind as one which occurs in individuals in contact with a merely physical environment of things. And, as has just been stated, the *aim* was ability of individuals to live in cooperative integration with others.[7]

He described two factors which led to the association of his school with exaggerated individualism. One was that visitors were accustomed to thinking of classrooms as highly controlled places where lessons were recited. In contrast, the freedom of movement and range of activities they found in the Dewey School *appeared as uncontrolled* liberty.[8] More important, he said, was that he and his staff were breaking new ground. They were trying to discover what some of the natural interests, needs, and capabilities of individual children were, in order to try the hypothesis of guiding these toward social and academic ends. The "individualistic" was overweighted in order to get data upon which to act.

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[7] *Ibid*., p. 467. (Dewey's italics.)

[8] For a comparison which vividly contrasts the two, see Joseph Mayer Rice, *The Public-School System of the United States* (New York, The Century Co., 1893) with his descriptions of the mechanical, rote learning of classrooms in New York and Chicago of the 1890's with Mrs. Laura L. Runyon's account of her visit to the Dewey School; Laura L. Runyon, "A Day with the New Education," *The Chautauquan*, Vol. 30, No. 6 (March, 1900), pp. 589-592. She visited the school after she became appaled at the quality of teaching in the public schools. Mead had told her husband that the Dewey School was "one of the greatest movements of this century." Her visits convinced her of its merits. She eventually joined the staff as an instructor in the history area and became editor of *The Teachers' Reports*, which constitute the primary sources of the work of the school.

It may be noted that the word "social" was one of Dewey's terms like "experience" or "activity" that was a heavily loaded concept. It had more than a single meaning in his own writings, and the meanings which it did have received their special character from his philosophical theory. It meant, for example, "social" in the sense that man is a social being who attains mind and self only when nourished in social experience. But "social experience" has a number of other dimensions, too. One of these is found in the direct, interpersonal relations one has in a group. Another involves a person's relations with his contemporary culture in his immediate environment and as affected by social happenings in other places. Next, there is the individual's contact with the immense storehouse of civilization's accumulated knowledge and experience and the institutions for transmitting and advancing it. Finally, "social" has a moral connotation. Dewey saw the individual as a member of a community which had a past, a present, and a future. The moral dimension involved the responsibility of absorbing into selfhood the values and skills made available by civilization in a way to maximize one's own growth and acting to do the same for all others.

If confusion and misinterpretation followed, Dewey's own usage may be held responsible in part. We must recognize, though, that he was a pioneer thinker trying to clarify his ideas as he wrote. He took it for granted that his terms would be read in the context of his total thought. That was expecting a lot.

A common misinterpretation is that Dewey meant social only in the sense of "social adjustment" to the group, or to contemporary social realities. This is false. Where education is concerned, an important social factor consists of the products and processes of man's mind as represented in scholarship, science, and school subject matter. In order to distinguish this use of the term "social," we shall refer to it as "civilizational." Since Dewey stressed that he put the social-civilizational feature first, its educational bearing deserve attention.

An important feature in coordinating the individual and the social was the idea of conceiving the school as a community. Minds and selves are formed out of free interaction with others -- through communication, cooperation, inquiry in activities, and thinking. This was a radical departure from the image of the schoolroom as a place where lessons are repeated. Furthermore, outside social life was too complex for a child to grasp with understanding, and the amount of knowledge was overwhelming. The school was to become a special kind of community that would help the child see the meaning of both. To do this, there should be continuity between the school's activities and basic aspects of the out-of-school world of the child; study should be organized in terms of a framework of simplified principles and concepts that would introduce order into a welter of data. Finally, the school should represent in the whole pattern of its life the values and qualities of human relations that promoted growth. This meant that the ways of learning and living should demonstrate habits of cooperation, free communication, and reflective thinking -- the values of the democratic ideal. The theory held that values were learned better when they were lived than when merely talked about.

But the social as represented in scholarship also was essential. Dewey pointed out that next, after conceiving his school as a form of "community-life," he had to take on the problem of working out a program of subject matter. His theory of interest committed him to seek hypotheses for the first part of his school's program that would build school work on experience and activities of the pre-school child. The theory also insisted on the necessity of directing these immediate interests to significant educative ends. Basic skills and the knowledge contained in the subject matters had to be made vital parts of the school program as the child progressed. As an experimental school, two of the most obvious courses were rejected: (1) to follow the traditional organization of subject matter, and (2) to permit children to engage in a free selection of activities that had immediate appeal but led nowhere. In reviewing educational events in the thirty years after leaving the school, he expressed satisfaction at seeing considerable enrichment in school studies. But "enrichment" often followed the two paths he had rejected. One response to the increase in knowledge was merely to push down into the elementary school material which formerly had been taught at upper levels. When introduced as isolated segments, this procedure had questionable results. The other tendency had been to introduce "under the name of projects disconnected jobs of short-time span in which there is emotional stimulation rather than development into new fields and principles, and into matured organization."[9]

He then stated the approach to the civilizational-subject matter aspect which was represented in his school.

> It was an essential part of the conception of proper subject-matter that studies must be assimilated not as mere items of information, but as organic parts of present nees and aims, which in turn are social. Translated into concrete material, this principle meant in effect that from the standpoint of the adult the axis of the course of the study was the development of civilization; while from the standpoint of those taught, it was a movement of life and thought dramatically and imaginatively reenacted by themselves. The phrase

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9. Ibid., p. 470. (Dewey's italics.)

> "development of civilization" suggests something both too ambitious and too unified to denote just the materials actually used. Since some forms of social life have made permanent contributions to an enduring culture, such typical modes were selected, beginning with the simple and going to the complex, with especial attention to the obstacles which had to be met and the agencies which were effective, including in the latter new inventions and physical resources and also new institutional adaptations.[10]

This leads us to consider the basic structure of the curriculum which consisted of: the "occupations" and three intellectual strands related to them; (1) historical or social studies, (2) science, and (3) communication and expression.

The Occupations

The occupations represented the most dramatic departure from traditional programs and became perhaps the most highly publicized feature of the school. Full accounts of the occupations are available in the literature on the school.[11] We shall limit ourselves to observations which attempt to show their relation to the over-all plan.

The hypothesis of the occupations was an ingenious one which seemed to contain possibilities for correlating a number of ideas stemming from the general philosophical-psychological theory. The epistemological thesis was that human intelligence developed in connection with needs and opportunities for action. The curriculum problem was to create a design rooted in this principle, that would include initial school experiences appropriate for children beginning their school work, and which would also serve as a base for developing a unified progression of studies at more advanced levels. The occupations seemed to fill the bill. Since they held such an important place in the plans for the school, we shall examine them first, in terms of their theoretical origins, and second, with respect to their pedagogical applications.

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[10] Ibid.

[11] See for example, Mayhew and Edwards, op. cit., Ch. 4, "Household Occupations," and Ch. 5, "Social Occupations Serving the Household." Also, John Dewey, "Monograph Number 4 -- Textiles," and "Monograph Number 7 -- Manual Training," The Elementary School Record, Vol. 1 (April, 1900 and October, 1900).

The Theory of the Occupations

The use of occupations -- such activities as gardening, cooking, textile work, and carpentry -- may seem to be a strange, quaint, or esoteric foundation on which to build an educational program. Critics may even point to them as "proof" of the latent anti-intellectualism in Dewey's educational theory. This writer cannot recall, offhand, any school system that has followed Dewey's suggestion that the content of studies should be closely integrated with such activities. Yet no serious student of Dewey's work at Chicago can avoid confronting them at the center of things. They become intelligible only as we see them in relation to Dewey's efforts to take a genetic approach to the study of psychic life and thought processes and to incorporate anthropological insights into educational theory. In "Interpretation of the Savage Mind," (1902)[12] we find an elucidation of how the concept of "occupations" was an intrinsic part of his general orientation. One can understand his conviction that the idea contained serious possibilities as a liberalizing as well as a unifying educational feature.

In the article Dewey argued that a reconstituted genetic approach to psychology is necessary to understand the evolution of mind. The theme is familiar; but, in this case, he illustrated it with anthropological material and related it to the concept of occupations.

The opening paragraph states:

> The psychical attitudes and traits of the savage are more than stages through which mind has passed, leaving them behind. They are outgrowths which have entered decisively into further evolution, and as such form an integral part of present mental organization. Such positive significance is commonly attributed, in theory at least, to animal mind; but the mental structure of the Savage, which presumably has an even greater relevancy for genetic psychology, is strangely neglected.[13]

The failure was due, he said, to a faulty employment of comparative method. In Herbert Spencer's Sociology, for example, generalizations are made about the "primitive mind" based on a miscellaneous hodge-podge of primitive cultures including Bedouins, Papuans, Andamanese, Hottentots, Malays, Bechuanas, etc. They have been torn away from their special cultural and natural environments and handled as a single phenomenon by virtue of being "primitive." As such, they are treated negatively with traits ascribed to them such as mirthfulness, improvidence, chaotic temperament, and lack of curiosity and ingenuity. The method of collecting and listing incoherent traits fails to provide a meaningful conception of mind. The way out is to abandon the sterile method and to see that mind has a pattern which is part of an on-going whole of behavior. Different qualities of mind may be seen as functioning modes of adaptation varying with different cultural patterns. Dewey presented his own method:

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[12] John Dewey, "Interpretation of the Savage Mind," Psychological Review, Vol. 9 (May, 1902), pp. 217-230. Reprinted in Dewey's Philosophy and Civilization (New York, Minton, Balch and Co., 1931). pp. 173-187. (The former version is used here.)

[13] Ibid., p. 217.

> The biological point of view commits us to the conviction that mind, whatever else it may be, is at least an organ of service for the control of environment in relation to the ends of the life process.
>
> If we search in any social group for the special functions to which mind is thus relative, occupations at once suggest themselves. Occupations determine the fundamental modes of activity, and hence control the formation and use of habits. These habits, in turn, are something more than practical and overt. "Apperceptive masses" and associational traits of necessity conform to the dominant activities. The occupations determine the chief modes of satisfaction, the standards of success and failure. Hence they furnish the working classifications and definitions of value; they

> control the desire processes....The directions given to mental life thereby extend to emotional and intellectual characteristics. So fundamental and pervasive is the group of occupational activities that it affords the scheme or pattern of the structural organization of mental traits. Occupations integrate special elements into a functioning whole.[14]

He argued that one can identify patterns of mind that correspond to cultural occupations such as hunting, farming, trading, manufacturing, and so forth. Analyzing the hunting vocation of Australian Aborigines as a case in point, he demonstrated at length that mental patterns developed in the basic occupation or activity of hunting are carried over into the whole gamut of cultural customs, feelings, and products; approaches to courtship, war, art, and religion are psychologically assimilated to the pattern developed in the hunting vocation. He defended the idea that this provides a method for interpreting social institutions and cultural resources. It was, in short, a psychological method for sociology. As an example, Dewey said that if one looks at an agriculturally-centered culture, one finds a markedly different pattern of mind. More direct psycho-physical activities have given way to technical modes, social divisions of labor, and more complex and conscious mental habits.

This is not the place to attempt to follow the argument in detail, nor to assess its validity. For our purposes enough has been said to establish that Dewey was responding to the anthropological developments of his time and was incorporating them into his philosophical-psychological point of view. That the occupations played a central rather than a trivial role is reinforced by the concluding sentences of the"Savage Mind" article.

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[14] *Ibid.*, pp. 219-220.

> ....the adjustment of habits to ends, through the medium of a problematic, doubtful, precarious situation, is the structural form upon which present intelligence and emotion are built. It remains the ground pattern. The further problem of genetic psychology is then to show how the purely immediate personal adjustment of habit to direct satisfaction, in the savage, became transformed through the introduction of impersonal, generalized objective instrumentalities and ends; how it ceased to be immediate and became loaded and surcharged with a content which forced personal want, initiative, effort and satisfaction further and further apart, putting all kinds of social divisions of labor, intermediate agencies, and objective contents between them. This is the problem of the formation of mental patterns appropriate to agricultural, military, professional and technological and trade pursuits, and the reconstruction and overlaying of the original hunting scheme.
>
> But by these various agencies, we have not so much destroyed or left behind the hunting structural arrangement of mind, as we have set free its constitutive psycho-physic factors so as to make them available and interesting in all kinds of objective and idealized pursuits -- the hunt for truth, beauty, virtue, wealth, social well-being, and even of heaven and of God.[15]

B. Pedagogical Role of Occupations

Since his school was to be a laboratory in educational psychology, committed to the study of the development of mind both in the child and in race experience, it is not surprising that he turned to the concept of "occupations" for pedagogical purposes. They seemed to contain rich possibilities for integrating many aspects of his theory with school practice. From the beginning, though, he had trouble winning understanding and acceptance of the idea. He repeatedly emphasized that he had no interest in the occupations as busy work, nor was he interested in making children into chefs, seamstresses, or carpenters.

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[15] Ibid., pp. 229-230.

Let us turn to the case that could be made for placing the occupations in the curriculum.

(1) They seemed to contain possibilities for relating the learning activities of the school to the out-of-school experience of the child. They included activities that the child was familiar with in the home. They also represented "the fundamental processes and instruments by which society has made itself what it is in the subordination of nature to human ends."[16] Dewey wanted to capitalize on the interests of children, but he was trying to avoid the "What are you interested in doing today, John?" approach. As we saw earlier, an educative interest was one that could be guided into significant learning. The hopes that he had for the occupations as interests are reflected in one of his descriptions of them:

> The activities selected for school life.... should be basic, that is those that provide

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[16] John Dewey, Lectures for the First Course in Pedagogy, No. 7.

> for fundamental needs such as food, clothing, or shelter. Such activities are genuine and timeless. Their reality excites the interest of the child and enlists his effort, for they are what his elders do, have done, and must continue to do.[17]

Thus the assumption was that interests that dealt with universal human needs such as food, shelter, and clothing could be located. Because they were also basic in the life of a child, they would engage his interests and efforts.

(2) The occupations squared with other aspects of the psychological theory. Dewey held that the first level of child development was predominately a stage of motor-expressive activities. The occupations provided avenues for utilizing four natural impulses of children: the constructive, which begins with simple physical coordinations and moves into the use of tools and technical skills; the impulse to investigate and experiment, with the teacher's job being that of directing questions and inquiries in more meaningful directions; the social impulse of the young child to share and communicate his experiences; and the expressive, related to the others, but requiring adequate materials for outlets.

> The fundamental point in the psychology of an occupation is that it maintains a balance between the intellectual and practical phases of experience. As an occupation it is active or motor; it finds expression through the physical organs, the eyes, hands, etc. But it also involves continual observation of materials, and continued planning and reflection in order that the practical or executive side

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[17] Mayhew and Edwards, *op. cit.*, p. 256.

> may be successfully carried on....It differs [from a trade] because its end is....in the growth that comes from the continual interplay of ideas and their embodiment in action, not in external utility.[18]

(3) The occupations could also affect the child's attitudes toward the learning activities of the school. Children could gain a sense that the classroom was not isolated from life; that the skills, knowledge, and ways of thinking learned in school were of the same nature as those employed in their homes and communities -- and in societies of other times and places. With this kind of initial experience, the way would be open to lead children into richer intellectual fare.

(4) Use of the occupations was justifiable educationally only if they became a means for securing a deeper liberal educational experience.

> In educational terms, this means that these occupations shall not be mere practical devices ....but active centers of scientific insight into natural materials and processes, points of departure whence children shall be led out into a realization of the historic development of man.
>
> The occupation supplies the child with a genuine motive; it gives him experience at first hand; it brings him into contact with realities. It does all this but in addition it is _liberalized throughout by translation into its historic and social values and scientific equivalencies_. With the growth of the child's mind in power and knowledge it ceases to be a pleasant occupation merely and becomes more and more a medium, an instrument, an organ of understanding -- and is thereby transformed.[19]

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18. Dewey, _School and Society_, pp. 131-132.

19. _Ibid_., pp. 17,20. (Author's italics.)

The occupations qualified as a fruitful hypothesis for beginning the school experience of the child. As a continuing part of the program, they provided a means for keeping the theoretical and the concrete in interaction. But Dewey's concept of the levels of thought and experience demanded a progression toward another emphasis. As he put it:

> The pressing problem with respect to "subject matter" was to find those things in the direct present experience of the young which were the roots out of which would grow more elaborate, technical, and organized knowledge in later years.

He added:

> The solution of the problem is extremely difficult; we did not reach it; it has not been reached and in its fulness will never be reached. But at all events we tried to see the problems and the difficulties which it presented.[20]

The shift toward intellectual, specialized studies was to become more marked as the secondary level was approached. The kind of feature represented in the occupations never was to disappear completely, but the more direct activities would give way to methods more characteristic of laboratory experimentation, field investigations, and so forth.

In the curriculum design, the occupations were to be accompanied by three intellectual themes or strands: history, science, communications, and expression. We are now ready to examine the approach followed in these areas.

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[20] Mayhew and Edwards, op. cit., pp. 468-469.

CHAPTER X

HISTORY

The intellectual content was to be developed in ways consistent with the theory described in the psychology of experience and its levels of development. The occupations were to provide the unifying hypothesis that would, on the one hand, engage the interest of the child and, on the other hand, provide a base for introducing specialized skills and studies. Dewey recognized that the pedagogical path he had plotted was difficult and untried. But the objective of shaping an educational program to provide truly rich experiences in liberal and scientific studies was crystal clear. Dewey had the general design defined. The details and the specific means were to be developed and modified in the light of actual efforts. His inner confidence was based on the conviction that his theory of knowledge and learning was rooted in the reality of the human situation. There is no warrent for charges that the school was an experiment in laissez-faire education.

In practice, the development of the curriculum fell into two phases.[1] (1) In the first (1896-1898), specific ideas for school purposes, based on the theory, had to be clarified. The 1895 Plan of Organization of the University Primary School provided a sketch of the vision. As pupils arrived and grew in numbers, a sequence of studies was created. The first two years contained a good deal of groping and a number of false starts. Efforts were complicated by ever present financial difficulties and a search for adequate housing. As enrollment grew, the school had to be moved from its original quarters in a residence at 5718 Kimbark Avenue, to the South Park Club House in 1897, and then, in 1898, to an old residence at 5412 Ellis Avenue which brought it within the University complex. A staff, capable of sharing the dream and possessing initiative and creativity to forward it, had to be organized. (2) The second period (1898-1903) was a time for consolidating and revising the program on the basis of courses and methods that had proved promising. Children were in attendance who had been following the order of studies. Transitions to emphases appropriate for older groups were begun.

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[1] Mayhew and Edwards, *op. cit.*, Ch. III, "Experimental Practices Developing the Curriculum."

The basic theory held that the several fields of knowledge represented the products and processes of man's "minded activities." Their common origin lay in social life, in the joint efforts of men to order and control their experiences with a natural and social environment.

> ....the unity of the curriculum is found in the unity of social life which that curriculum represents. Each study stands for one differentiated phase of social life, and the problem of correlation is to make the studies act and react upon each other in the same way in the school that the processes for which they stand do in actual social life.[2]

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[2] Dewey, Lectures for the First Course in Pedagogy, No. 4, p. 7.

Dewey rejected notions which conceived of bodies of knowledge as self-contained entities. An approach to knowledge that would avoid the pitfalls of isolated abstraction had to be rooted in this concept of the social origin of learning. As we have seen, Dewey's hunch was that the occupations, in which men worked out answers to fundamental needs, were critical to the advancement of skills and knowledge. The child had this dimension of human experience represented in himself; first, in his personal strivings to handle his world through sensory-motor strivings, and second, through more complex intellectual behavior. He experienced the occupations in a partial but firsthand way in his home and community. They were to form a bridge for transporting him to vital and advanced levels of learning as represented in the studies that were the special province of the school. With these connections established and maintained, learning could go forward into the farthest reaches of intellectual life: history, the physical and social sciences, language, literature, and mathematics.

We shall forego an attempt to give an exhaustive account of the details of the curriculum. The aim will be to describe enough to indicate the basic intention. Since Dewey insisted that content and method had to be coordinated, we shall include examples of methodology with descriptions of subject matter.

The 1895 Plan of Organization recommended that beginning school experiences include three typical activities: cooking, carpentry, and sewing or textiles since they afford "adequate opportunity, on the psychological side for constructive work, while socially they represent the fundamental activities of the race."[3] The method, he said, is to analyze these activities into a knowledge of the materials and processes contained in them. In contrast to "object lesson" approaches, materials such as water and soil, vegetable and animal life should be studied as aspects of nature in interaction with man's activities. Arithmetical, chemical, and physical processes would be studied, not as sections of a text book, but as the forms in which materials are controlled. A basic attitude toward science will thus be established.

The social ramifications of these activities would involve tracing the historical changes in the processes invented for handling materials to meet man's basic needs. One of the major themes in the approach to history would be the study of changes in the nature of work. Geographical questions would naturally arise, since the physical environment is a major factor in determining the character of man's work.

The child's constructive activities in working with materials and seeing rich sets of relations in human affairs also called for modes of expression or communication. Drawing, coloring, modelling, and verbal and written expression would be required. Literature would be seen as one form of communication or artistic expression that grew out of vital, complex activity.

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[3] John Dewey, Plan of Organization of the University Primary School. Unpublished, University of Chicago, 1895?, p. 10.

Through all of this, the young child was to gain a clear sense that man is a social being. This would be reinforced by his participation in a school which itself is an active, cooperative, inquiring human community. One of Dewey's occupations, weaving, might be used to project an image of the educational venture he envisaged. The objective was to create rich educational tapestries. The direct, relatively undifferentiated experiences in the occupations are analogous to the rough, matted wool. From this base, strands representing important intellectual themes (history, science, communication, and the arts) would be developed. These, in turn, would lead to the intricate and elaborate textures of the specialized subject matters. The student, as the weaver, was to be an active participant in the processes that would lead to the reconstruction of his own experience.

History

A basic style of analysis in all of Dewey's thought was the genetic method. This involved the effort to gain insight into a complex process or problem of the present by tracing its history from the beginning through the successive stages of its growth. It is not surprising, then, to find that the study of history occupied a prominant place in the Dewey School.

Dewey was a critic, of course, of the common tendency to make history a study of a mound of facts with an emphasis on kings and battles. In Dewey's view, the fundamental thing about man's history, below the diversity and welter of data, was the growing ability to control nature and transform it into an instrument for realizing human ends. He saw the concept of control as a pivotal one in the past records of science and the arts, as well as in political and social history.

The subject matter and methods of studying history, as with other subjects, was to be coordinated with the needs and capacities of children of different ages. The three general stages of elementary education have been discussed. The first emphasized direct, sensory-motor activities, while in the second a need for mastering fundamental skills eventually came to the fore; in addition, a pre-secondary stage existed where capacities to analyze and generalize would emerge and a shift to more specialized studies would occur. As the school matured, the children were divided into ten groups that corresponded roughly to the ages indicated below. Any exceptions that were made for individuals were determined by the judgments of the staff. (The age of children in each group may be remembered by adding three to the number of the group.)

The Groups:

	Number	Age
First Stage	I	4
	II	5
	III	6
Transition	IV	7
	V	8
Second Stage	VI	9
	VII	10
Transition	VIII	11
	IX	12
Beginning of	X	13
Secondary	XI	14-15

In general, historical subject matter was chosen so that stages in the evolution of human society would correlate with the stages through which the children progressed.

Historical ways of thinking were introduced in the early period to promote insights into underlying facts that cause societies to take on their characteristic forms. The sub-primary children were involved in the occupations of their contemporary world. They re-enacted the fundamental occupations of the home, which was the center of all things necessary to the child's well-being. His perspectives were broadened to include an understanding of the interaction between the family and the community; thus, playing "store," "mailman," and "milkman," as well as "house," became relevant activities in the school during the first and second years. The children were engaged in direct, straightforward pursuits like building playhouses and engaging in a variety of adult role-playing "games."[4] Out of active involvement with the stuff and materials of life, the relevant questions would be raised which would lead to amplification and refinement in the later school years: Where does it come from? Where does it go? How does it work?

In the following year (Group III, age 6), attention was turned to the social occupations. Food, fibers, wood and metal as the stuff of cooking, sewing, carpentry (construction) were studied from raw material to finished product. Farming, weaving, mining, and lumbering were analyzed in terms of the roles each played in preparing materials for use. Considerable time was devoted, for instance, to the study of cotton. Physiographic conditions for planting, requirements for growth, etc. were all related. The mode of attack was "play" -- if we define "play" as active, constructive involvement with materials and without a long-range objective. Dewey argued that, at this age, while much energy is expended and the child is intent upon the project at hand, there is no conscious effort or attention.[5]

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[4] Mayhew and Edwards, op. cit., pp. 45-46, 60. George H. Mead's insights into the educative value of play and role-taking are reflected here. See George H. Mead, "The Relation of Play to Education," op. cit., pp. 141-146.

[5] John Dewey, "Reflective Attention," The Elementary School Record, Vol. 1, No. 4 (May, 1900), p. 111.

> ....the child's concepts are built up chiefly through his activities, rather than through his language. He must therefore play farmer, ranchman, miner, etc., and in his small way perform the occupations he would comprehend -- not with imaginary materials, but real ones, though his farm be but a 4 x 6 feet sandbox, his dairy but a glass bottle in which the cream is shaken or churned, and his mine the same sandbox at another time, modeled to represent the mountains from which the ore is extracted.[6]

He called this the principle of *indirect* learning: when "attention is not upon the *idea of learning*, but upon the accomplishing of a real and intrinsic purpose."[7]

Beginning with the fourth year in the School (7 year olds), the evolutionary development of civilization was the theme around which work in history was organized. Having begun with the occupations and then having proceeded to a study of raw materials and processes of production, the study of history began, in the fourth year, as an investigation of the occupational activities from their simple origins to their present complex state. Dewey argued that a child's interest in the historical evolution of the occupations and social life would proceed naturally from a personal involvement with them in the present.

> Further, the method is to follow out these activities into their social ramifications. Present social life, on [the] one hand, is too complex for realization by the child, while past life, taken as past, is remote and

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[6] Laura Louise Runyon, *The Teaching of Elementary History in the Dewey School*. Unpublished M.A. Dissertation in History and Education, University of Chicago, 1906, p. 22.

[7] Dewey, *Plan of Organization of the University Primary School*, p. 8.

> psychologically inert. But through his interest in his own activity of cooking and primitive building, the child is interested in the different forms this activity has assumed at different times. He can be led to analyze the existing complex social structure by following up the growth of the homes, foods, etc. of men, from the prehistoric cave dweller through the stone and metal ages up to civilization, etc.[8]

The pivotal question, "How did it all come about?" was the springboard for taking the children of Group IV back in time to the life of primitive man.

The child was to imagine himself facing a hostile environment stripped of all civilized conveniences. He was to gain a sense of the need to survey materials and to give shape to them to ward off dangers and secure the necessities of life. No effort was made to establish a one-to-one correspondence between a primitive era and a supposed primitive stage in child development as recommended by some "culture-epoch" approaches. The emphasis in the Dewey School was shifted to a consideration of innovations and inventions developed in prehistoric times.

Because the child's skills with the written word were too limited, he did not read and write about the life of primitive man's development to the Iron Age; instead, the approach combined thinking and doing. The students wrestled with hypothetical situations like the following: "What would happen if a primitive tribe encountered, in their wanderings, a rushing stream?" "Build a bridge."

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[8] *Ibid*., p. 10.

"How would they go about it?" "Let's pretend....," etc. And the children would actually fashion a bridge (probably a miniature version in the sandbox) using the kinds of crude materials and implements which would have been available to prehistoric man.

Mayhew and Edwards, from their experience in the Dewey School, describe this fourth year as a transitional one: an age when "the lure of the how and why begins to leaven the questioning mind."[9] Through investigation, discovery, invention, and re-invention, the child was to find the "secret of advance which has resulted for the race in an upward spiral of progressive action."[10]

The approach to history in the School was primarily industrial and economic (in terms of the way people make a living) and social (in terms of the effect of occupations on social life). According to Dewey:

> Whatever history may be for the scientific historian, for the educator it must be an indirect sociology -- a study which lays bare its process of becoming and its mode of organization.[11]

A concern with political history was deferred until the later years.

It must be noted that for the younger children the different subjects were not marked off sharply. Teachers were hired who were specialists, and children did move from class to class in history, art, science, manual training, and other subjects. But a serious effort was made to coordinate studies through faculty discussion and planning. It was an early form of team-teaching.

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[9] Mayhew and Edwards, op. cit., p. 97.

[10] Ibid.

[11] John Dewey, "The Aim of History in Elementary Education," The Elementary School Record, Vol. 1, No.8(November, 1900),p. 199.

In history, when the focus was upon man's confrontation with the physical-natural world, the affinity with science was peculiarly keen. Dewey saw the relationship thus:

> When history is completely organized, therefore, the fundamental branch of history around which the others will group themselves, and by which they check themselves, will be what we may call industrial history, meaning by that the record of the growth of agencies and instrumentalities for administering natural forces in subservience to human wants and ideals. If this is true, history has the most intimate connection on the one side with man's constructive activities, and on the other side with the development of natural science, and cannot be arbitrarily severed from these things educationally without great loss of its meaning.[12]

The fourth and fifth years, for seven and eight year olds, were pivotal ones and were most thoroughly and systematically developed. The fourth group, as already discussed, concentrated on the laying of socio-historical foundations. The fifth group (8 year olds) shifted study from the restricted primitive setting to a world which had been expanded by migration, exploration, and discovery. The psychological theory held that this was the period to shift from direct to "derived modes of activity." By age eight, the child had a psychological need to acquire skills in reading, writing, and number tools in order to progress. The acquisition of tools and techniques became imperative when remote ends replaced immediate gratifications as motivations to work.

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[12] Dewey, Lectures for the First Course in Pedagogy, No. 7.

Generally, the Phoenicians were chosen as the focal point for work in history in the fifth year. The Phoenician, as a trader rather than a farmer or a hunter, was a new kind of man confronted with new types of problems. Tools and weapons had to be supplemented by knowledge of the alphabet and a number system in order to carry out the commercial occupations which prevailed in their area of the Mediterranean. Miss Runyon noted that it is at this age that the child for the first time received formal work in reading, writing, and numbers.

> It was particularly desired, however, that the child, who took up seriously in this year, the use of symbols in reading, writing, and number, should realize the conditions in which these conveniences originated.[13]

Miss Runyon reported a lesson in which the students were struggling with the problem of establishing a standard of measurement by which lengths and distances would be judged among the merchants of the market place:

> Parts of the body as means of measurement were suggested. The distance from the end of the thumb to the first joint was used as a unity of measure, the span of the hand; the full length of the forearm and the pace were also suggested.

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[13] Runyon, op. cit., p. 30.

> The transition from a somewhat irregular unit to an adopted unit could usually be obtained from the class. For example, the distance from the middle finger to the elbow was used as a unit for measuring cloth and called a "cubit." After this had been used in many measurements, the teacher one day told a story of a Phoenician who went to trade in cloth, and, noticing that the men in the market place were of different heights, selected the man with the longest arm from whom to purchase cloth. The other merchants noted this, and called a meeting to decide what should be done. At this point the class was called upon for suggestions. One child thought the shortest man's arm might be taken as a standard, and others stop short of the elbow in their measurements; others that the tallest man's arm be used, and the little man measure above the elbow. When, however, someone suggested that a middle-sized man be selected and the rest get sticks just the length of his cubit, all agreed that this would be better.[14]

Later in the fifth year, horizons were expanded by studies of great explorers. The accomplishments of Prince Henry the Navigator, Magellan, Marco Polo, and Columbus were followed in great detail. The study of explorations and navigation led to questions about the oceans, meteorology, astronomy, the use of the compass, and astrology. Typical activities included map work and the charting of courses followed by explorers.

By age eight, the child had enlarged his perspective from the occupations in his own home to a larger view which included the beginning of the history of civilized human experience.

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[14] Ibid., p. 33.

In the sixth year (Group VI, age 9) attention was turned to the history of the United States. In searching for an introductory "unity" to the study of American History -- one which would provide a natural transition from the explorations and which would be relevant and meaningful in terms of the child's immediate experience -- the history of Chicago was settled upon, beginning with the penetration into the Great Lakes region by the early French explorers.

> This gives an opportunity to enlarge the concepts formed in the study of the Phoenicians and the early explorers. In imagination the child sees the frontier life develop into a thriving village, with needs of local government, system of taxation, improvements, etc. Through this discussion he is guided to comprehend simple forms of civic politics, so that the paved and sewered streets, the policeman and the postman, the alderman and the mayor, with all of whom he has been somewhat familiar, have now more definite parts in the social world.[15]

For Groups VI through X, history dealt with the American story: the exploration and conquest of the continent, the establishment of the colonies, and the founding of the republic.

More specialized study of history gradually was introduced. The children read historical accounts and prepared written and oral reports. However, they still continued their work in the occupations. Much time, for example, was devoted to the strategic geographical location of Chicago and the consequences of this factor in the lives of the inhabitants. One year the village of Chicago and its environs were constructed in sand. Students saw the role it played in the fur trade; then, with the coming of stage coaches and railroads, they saw how it became a center for trade in wheat, cattle, and other food staples.

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[15] *Ibid.*, p. 49.

During the study of colonial history, children in the textile studio had firsthand experiences with the spinning wheel and the loom. Several of the children reconstructed typical industries. The home life of the colonists was studied in some detail, and one group planned and carried through the furnishing of a colonial room. Plans were drawn for building a fireplace which was then built with some difficulty. Furniture and articles for cooking were made in the shops. The intention was to show how occupations and industries grew out of real needs, how individuals and communities became experts in making or growing certain things, and how trade between the colonies began.

Rather than continuing to described the details of the curriculum,we turn now to some of the methods employed in the teaching of history.

Textbooks were rarely used, but biographies were studied extensively, such as the story of Captain John Smith's role in the Virginia Colony. Biographies also were used to introduce discussion of the ethical qualities of men who faced difficulties and marshalled strengths to overcome them. Dewey, however, qualified the use of the biographical method in the teaching of history:

> Now while it is a valuable thing to teach history in connection with the biography of great persons, and to arouse in the pupil an appreciation for great characters, this after all, leaves us with too individualistic a conception of history. We need also to know how the social forces were at work and expressing themselves through these individuals.[16]

Frequent use was made of methods more recently popularized under the label, "method of discovery." In studying the campaigns of the Revolutionary War, for example, students worked from a relief map and made predictions of the strategy the British would follow after the seige of Boston. With an awareness of the British Army in Canada, they decided a likely plan would be for the British to effect a juncture near Albany by moving via waterways in New York from the North and South.

In Group IX, before studying about Virginia's House of Burgesses in their books, Miss Hoblitt reports:

> In discussing the first House of Burgesses the children were asked to suggest laws which would probably be enacted, and from their remembrance of the early mistakes and difficulties of the colony, were able to propose laws against idleness, trade with the Indians, laws regulating agriculture, etc. They decided in advance that King James would not be likely to tolerate for long Virginia's growing independence. As to the significance of his seizure of the charter there was a division of opinion, some thinking that

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[16] John Dewey, "Lectures on the Philosophy of Education," cited in Runyon, op. cit., p. 9.

> Virginia would thrive better under the king's protection because he had so much to think of and would not interfere with them, and others remaining loyal to the London Company.[17]

According to Dewey's theory, the child by age nine (and continuing through the remaining school years) had attained "the level of reflective attention," which made it possible for him to cope with the material and the methods of the later years. "With growing power, the child can conceive of the end as something to be found out, discovered; and can control his acts and images so as to help in the inquiry and solution."[18]

> In history work there is a change from the story and biography form, from discussion of questions that arise, to the formulation of questions. Points about which difference of opinion is possible, matters upon which experience, reflection, etc. can be brought to bear, are always coming up in history. But to use the discussion to develop this matter of doubt and difference into a definite problem, to bring the child to feel just what the difficulty is; and then throw him upon his own resources in looking up material bearing upon the point, and upon his judgment in bringing it to bear, or getting a solution, is a marked intellectual advance.[19]

By the time the student was ready to enter the final Group XI, he had followed the Americans through the period of colonization (especially Virginia, Plymouth, and New York colonies); the American Revolution; the framing of the Constitution and westward expansion. In addition, as a member of Group VIII (age 11), he had spent a better part of a year studying the European backgrounds of the colonists. Here the emphasis was on the social and cultural patterns that were in the experience of those people who had left Europe for the New World. (English village life was studied in depth.)

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[17] Margaret Hoblitt, "History: Group IX," Elementary School Teachers' Reports. Unpublished (January, 1900), p. 65. In the archives of the University of Chicago Laboratory School.

[18] Dewey, "Reflective Attention," p. 111.

[19] *Ibid.*, p. 111-112.

The actual program for the older children in Group XI (ages 14-15) was in operation for only two years. The records are most sketchy for this level and the impression conveyed is that the staff never got beyond a very tentative program. Some of the basic intentions, however, were apparent. A new kind of specialized study was to be introduced. The six preceding years had emphasized social and industrial history. It was felt that material about political institutions could be introduced more appropriately in the program of older children. One hunch was that political institutions could best be illustrated by study of the early Roman State, especially its organization and governmental machinery. Governmental forms were to be studied as institutions for the regulation of industrial and social life with special attention directed to the need to change in response to new situations. The general plan seemed to embrace the idea that after the sociological emphasis in history had prepared students

to differentiate peculiar types of social life, they would be ready to study civilizations other than the American and appreciate the special contributions of each to world history. The plan, therefore, was to shift from a psychological to a chronological approach; to begin with the ancient Mediterranean World and come down through the European story to the peculiar and differentiating factors in American history.

CHAPTER XI

SCIENCE

Dewey made his analyses of the nature and evolution of psychic processes in an effort to give man a better chance to understand and control his world. The capacity for reflective thinking was designated as the culminating feature of evolutionary development. His rationale held that human progress was dependent on strengthening the skills of reflective thinking. Dewey saw, in the procedures and values of science, a model of man thinking at his best. Here was a major instrument for progress. It is natural then to find science occupying an important place in his recommendations for the curriculum. In the Dewey School, science was both content and method, the *what* and the *how*; a study of the products and processes of the mind at work.

The amount of detail about the science program in the literature of the School is extensive but ill-organized. However, a comprehensive description of the science curriculum and the principles of teaching it would require a lengthy paper in itself, and a briefer account is bound to be partial and subject to distortion. We shall try to convey an impression of some of the major intentions. In order to give a feeling of the spirit, we shall make liberal use of quotations and examples of methodology.[1]

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[1] We draw extensively on the account of the science program given by Katherine Camp Mayhew in Mayhew and Edwards, *The Dewey School* (Chapter XV *et passim*). She was head of the

How did the science program appear in operation? The progression of experiences in science coincided with the general principles previously discussed. Science was seen as an organic part of social experience in the early stages; gradually the child was led toward more specialized study.

The unifying theme was to see scientific advances as events in the growth of man's insight into the nature of his world and his capacity to control it. In the manifold of studies in science, the teacher was expected to keep two purposes constantly in view:

> (1) to provide the child with opportunity to develop and use, thereby learning, great scientific truths, and (2) to preserve through use, the child's instructive spirit of inquiry, to build in his mind a concept of scientific method as a practical tool and thereby guide him into the experimental, the scientific habit of mind.[2]

In order to realize these purposes, an ordered sequence, coinciding with the levels of the child's development, was deemed essential. The attitudes about science developed in the pre-primary and early elementary levels were felt to be crucial for later studies.

The original impetus for work in science was to come through the concern with the home and social occupations

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science department and vice-principal in charge of curriculum. An inspection of primary sources in The Teachers' Reports shows that her description is based on the record in addition to recollection of her experiences.

[2] Mayhew and Edwards, *op*. *cit*., p. 283.

and later with the specific occupations of cooking, sewing, and carpentry. At the pre-primary level, it was assumed that the young child "comes to the school to do." The teacher's job was to work so that even children from four to six years old would gain a sense that activities of many kinds required processes of active investigation: imagining possible results of this or that idea, projecting guesses and testing them to find the results. Gradually each individual would be led to see how he needed the results of scientific knowledge to secure certain ends. Then he would be taught how he could acquire knowledge for use in his constructive activities or inquiries.

A concomitant attitude to be developed was the sense that science is a social activity. Dewey wanted to avoid giving children the impression that science is a separate, abstract thing. His epistemology held that knowledge grows out of man's efforts to meet the range of his needs. In the curriculum design, the nature of man's occupations or work was held to provide a useful device for establishing this insight. During the early years of the school, science was developed in connection with history.

> The text of the story was always the way different groups of people had dealt with, used, and subdued their environment, how they had won from it the means for further subduing and more adequately ministering to their rapidly increasing needs. In following the details of this oft repeated story, these children saw that as man's needs increased in number and kind, so did his

> appreciation of the value of satisfied senses, of convenience, of comfort, of beauty deepen. Each child saw and often enacted the part that activity played in all this moving and dynamic drama. Ideas became deeds and brought about results that changed current ways of living and gave incentive to a further quest ...(the arrow, the sail, etc.)....Into the small rivulets of each child's experience, therefore, flowed these tricklings from the great stream of human endeavor; the doings of man, his inventions, his discoveries, his accomplishments in the physical world, his method of thinking, and the growing fabric of his social relationship.[3]

Describing the work undertaken in science by Group III (6 year olds), Dewey summed up the rationale for the early years.

> The study of natural objects, processes, and relations is placed in a human setting. During the year, a considerably detailed observation of seeds and their growth, of plants, woods, stones, animals, as to some phases of structure and habit, of geographical conditions of landscape, climate, arrangement of land and water, is undertaken. The pedagogical problem is to direct the child's power of observations, to nurture his sympathetic interest in characteristic traits of the world in which he lives, to afford interpreting material for later more special studies, and yet to supply a carrying medium for the variety of facts and ideas through the dominant spontaneous emotions and thoughts of the child. Hence their associations with human life. Absolutely no separation is made between the "social" side of the work, its concern with people's activities and their mutual dependencies, and the "science," regard for physical facts and forces -- because the conscious distinction between man and nature is the result of later reflection and abstraction, and to force it upon the child here is not only to fail to engage his whole mental energy, but to confuse and distract him. The environment is always that in which life is

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[3] *Ibid.*, pp. 221-222.

> situated and through which it is circumstanced; and to isolate it, to make it with little children an object of observation and remark by itself, is to treat human nature inconsiderately. At last, the original open and free attitude of the mind to nature is destroyed; nature has been reduced to a mass of meaningless details.[4]

By the fourth year, (7 year olds), science, geography, and history formed an inseparable curricular unity. In the study of primitive people, the adaptation of man and his occupations to physiographical conditions was the central theme: man operates in and comes to terms with a natural world which requires understanding in order to be subdued and controlled. The students grappled with such problems as "Which areas would be particularly suited to agrarian life, maritime life, pastoral, or hunting life?" Out of this general concern grew the related study of plants, animals, minerals, metals, and the typical mechanical and chemical processes utilized in primitive life such as smelting, dyeing, and fashioning pottery, all of which the students re-enacted experimentally. Much of the early work in science was devoted to biological and geological subject matter since plants, animals, and rocks were readily observable and lent themselves to simple experiments. They were also the "stuff" of the natural world with which man contended in his civilizational journey.

As opposed to the method of the recitation, a variety of approaches were used that coincided with the attitudes of scientific inquiry. In studying the biological aspects of the environment, excursions and planned observations were conducted. Children learned to make tentative generalizations and to check them against observed data. They were taught to view living things in terms of function and of adaptation to environment. Noting the adaptive patterns of the plants in wooded areas and along streams, comparisons were made with the characteristics of plant life in the cultivated school garden. In an introduction to the earth sciences, the children were taken on rock collecting expeditions. The rocks were categorized and discussed in terms of their various uses in human affairs -- eg., some for making cements or plasters and others for paints.

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[4] John Dewey, "General Principles of Work, Educationally Considered," The Elementary School Record, Vol. 1, No. 1 (February, 1900), p. 13.

Examples of inductive methods, consistently employed, are described in The Teachers' Reports. Miss Camp, the science teacher for the eight year olds, made the following entry:

> They have brought together what they know of the formation of the earth. This week they have worked out what soil is. They named the things that they would find in tracing it back to its source in the rocks, giving their ideas of the way in which it was formed. They mentioned sandstone first as an ingredient of soil. It took a good deal of questioning to get them to formulate what the black earth or loam was as plant mould. I tried to get them to give me an idea of organic matter as what was left of plants and animals after life was extinct, but they have not yet given me anything about animals forming part of the soil. The first time in going over this one of the

> children told me that there would be "lime" in the soil from the breaking up of the limestone. On making a list the second day no child suggested lime or any other part of a rock as being dissolved in water in the soil. I showed them all sorts of shells and corals and limestone with shells in it, but as yet they have not drawn the conclusion as to how these shells were made or even the step that the rock full of shells was made from shells similar to those they have been observing.[5]

Although the relation between teacher and students was one of free interchange which encouraged the raising of questions and suggestions for follow-up activities, the basic disciplines of experimental work were insisted on. The children were taught that they could put certain questions to nature, but the results depended on the nature and clarity of the questions.

> After the children have started their experiment, they begin their record, stating as minutely as their ability to write and compose will allow all that they did, sometimes illustrating with drawings. What takes place is recorded, and they discuss the meaning of the result. It is rarely that some member of the group does not arrive at the correct conclusion; if this is challenged, a check experiment is started. In order to maintain alertness it is desirable to encourage this, and not have the children think the matter is all settled, or merely appeal to the teacher's opinion. The conclusions are then added to the record.
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> The writing of records, so essential to scientific work, also serves the purpose of lessons in

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[5] Katherine B. Camp, "Science: Group V," Elementary School Teachers' Reports. Unpublished (February, 1900), pp. 112-113. In the archives of the University of Chicago Laboratory School.

> writing and composition. Individuality of expression is encouraged, but the three points of a good science record -- what was done, what happened, and the conclusions -- are insisted upon. One of these brief records is as follows:
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> We put a geranium plant under a bell jar with a glass of lime water, and the lime water was clear. We put the bell jar in the dark overnight, and in the morning the lime water was white on top; it showed that the plant breathed out carbon dioxide.[6]

In cooking classes, the children were confronted with scientific questions about the effects of heat on various substances, and about the nature of the growth patterns and the composition of food stuffs. In sewing, the processing of flax, cotton, and wool was studied from raw material to finished product. The teacher of manual training raised questions about the properties of wood and metals, and the principles involved in simple tools and machines. By meeting problems and raising questions in these activities, the teachers felt that the children were re-enacting experiences of the human race. Because the studies provided practical insights into conditions that required extension of learning, children could sense how knowledge was essential to the whole of human life. In addition, they would gain insights into the evolution of the arts.

At the beginning of the first stage, the emphasis was on direct use and manipulation of materials. Toward the end of that period, interests requiring more prolonged study emerged. A unit on the physical history of the world was undertaken which included an introduction to the idea of geological epochs, the nature of the atmosphere, climate, and plant and animal zones. The intention was to give children an idea of the earth as man's home.

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[6] Katharine Andrews, "Experiments in Plant Physiology," The Elementary School Record, Vol. 1, No. 4 (May, 1900), p. 108.

An entry in the records of one of the science teachers showed that the children developed an image of earth as:

> ....a rock ball, on which the continents are slight elevations covered with a think soil produced by the crumbling of the rock. They pictured this ball surrounded by great bodies of water in which warm and cold currents circulate and modify the climate of the shores. It is covered with an atmosphere, a medium of exchange, by means of which the most important conditions of life -- water, light, and heat -- are distributed. They thought of it as covered with plant and animal life, its kind and abundance being determined by physical environment. For the most part, they had a fairly definite idea of the chief causes affecting climate and the zonal distribution of plants and animals, and of man's continuous control and adaptations of conditions about him.[7]

In the second period of elementary education, a move was made toward dividing the study of science into two broad areas: physiography (related to the study of history) and experimental science (biological and physical). Physical geography, for eleven year olds, dealt with the general physical characteristics of the United States. More formal methods were employed -- discussion, written papers, assigned readings, and construction of putty relief maps. This shift was explained on the grounds that children, at this stage, developed an interest in the value of classified knowledge for use in more mature investigations.

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[7] Mayhew and Edwards, op. cit., p. 286.

In the third stage, the trend toward more specialized study continued. Group X (age 13) took the first general course in biology. This centered on the evolution of animal life, beginning with simple forms and ending with the physiology of man. Earlier, the physiology of the body was introduced through analysis of gymnastic exercises. Students took up the general subject of walking, for example, as involving a series of joints.

> They found the nature of the hip joint and of the knee joint as a hinge in one direction and of the ankle as possessing more pivotal motion and the toes as they move as a whole. Several of the children insisted that there was a joint between the toes and the ankles, but found by examining the feet that there was no movement there. One child asked why there were no large muscles on top of the shinbone and satisfied herself as to the reason by finding there were no movements of the lower leg forward and upward from the knee beyond a perpendicular line. The other exorcise taken up was the arm movements. Starting from the shoulder and upper arm muscles they worked out the mechanism of the forearm. They located the biceps muscles by feeling of them and found that they were attached by a tendon at the shoulder and below the elbow to the forearm. They tried to move the door on its hinges by a string attached in a way similar to the attachment to the biceps and found it was very difficult to do. They thought that it was queer the arm should be attached in a way so difficult to move.

> They are now making models to work at each
> of the different classes of levers.[8]

Experiments were employed that stressed the role of theory and generalizations. The twelve and thirteen year olds, for example, studied photography as a basis for understanding concepts in the physical sciences. This led to a series of experiments on light, which brought out the principles involved in the construction of an image in a convex lens. The children began by working out the laws which govern the size of a shadow. A further study of light emphasized the history of the various scientific theories about its nature. After theories of the ancient Greeks and the corpuscular theory of the sixteenth century were stated, they were put to various scientific or experimental tests. The composition of light was demonstrated by experiment. A brief study of spectrum analysis and recent discoveries made by its use were included. The group saw that by means of the solar spectrum, more knowledge had been gained of the constitution and temperature of the sun.

In the physical sciences, studies were made of gravity, heat, light, and electricity. The goal was to build in the child's mind, over a period of years, a mental image of the physical and biological processes of change and growth as a continuous round of freeing and utilizing energy.

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[8] Katherine B. Camp, "Science: Group VIII" (January, 1900), op. cit., p. 26.

Physical forces were seen as factors in the process, sometimes tearing down and at others building up. The nature of solution, evaporation, crystallization, and precipitation was studied through experiments to make the child thoroughly familiar with solids, liquids, and gases. Many topics were pursued in a spiral fashion. The lower groups raised questions in one form, and later these same problems were studied more systematically.

The oldest children (14-15) explored special aspects of chemistry and physics. It was considered that these children were approaching an adult level of interest. "They were beginning to see science as knowledge logically arranged (or possible of such arrangement) for the purpose of searching out more knowledge."[9]

The aim of the elementary school was to develop attitudes which would lead children to view science as an intrinsic part of the evolution of man's mind. With this view adequately secured, the child would be ready for a systematic study of botany, zoology, astronomy, chemistry, and physics at the secondary level and beyond, without feeling that these were isolated "school subjects." The early approach was to establish the concept that the sciences are unified in that they are manifestations of man's effort to understand and to come to terms with the whole of his world. The child, through a multitude of direct experiences, would be taught that the habits of inquiry are a natural part of man's striving. He would come to see that more complex problems and interests require progressively refined and disciplined skills and techniques; that specialization is a necessary extension of the need to pursue inquiry in depth. At the same time, the theory held that specialization could become sterile unless it was combined with an understanding of the interrelation and interdependence of fields of knowledge. The task of secondary and higher education was to work on the combined problem of specialization and interrelation.

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[9] Mayhew and Edwards, op. cit., p. 219.

We may note here that such approaches required teachers who were thorough students of science, who had a clear grasp of fundamental concepts and principles, and who were trained in experimental methods. The teachers of science were experts. But, in accord with Dewey's image of the teacher, they also had to be students of "the child's mind" -- sensitive to the kinds of experiences appropriate for children at different ages and imaginative in their efforts to get children to feel the excitement in scientific inquiry. They had to be professional in the sense that they were continuing students of the process of teaching. The curriculum rationale was to provide the general direction; flexibility was to be employed on the specifics. It seems fair to add that the kinds of methods and materials utilized in the Dewey School could not be transferred to mass education enterprises where similar resources were lacking. We must remind ourselves that Dewey insisted that the primary function of his school was to project educational procedures consistent with his theory. He took the stand that conditions had to be provided in the Laboratory School which would enable it to demonstrate what an excellent education could be like. The records seem to show that in general there was one master teacher for every eight or nine students; with the inclusion of graduate assistants, there was one adult for every four or five children. No pretense was made that the school's procedures could be employed in other school systems where quite different conditions prevailed.

SUMMARY OF SCIENCE TOPICS STUDIED -- WINTER 1900*

Group IV (Age 7)	Study of metals Construction of a kiln for making charcoal Smelting Molding copper weights
Group V (Age 8)	Tanning rabbit's skin Currents Gravitation Comparisons of weights and measures Experiments to show relation of movement of earth to sun Weight and pressure of air Making compasses
Group VI (Age 9)	Formation of the earth The Appalachian Mountain range Beginning of rivers in the mountain region of Virginia Erosion of rivers as affecting the Appalachians Study of river systems in the U.S. Comparison of land and water upon the globe Interpretation of landscape pictures Study of pewter Experiment with antimony Comparison of weight of mercury and water
Group VII (Age 10)	Finding proportions of soluble albumen in wheat flour Experiments with the lever
Group IX (Age 11-12)	Making alloys Experiments with oxygen and carbon dioxide Experiment concerning changes from liquid to solid to gas Visit to Armour Institute in connection with study of electricity
Group X (Age 13)	Theories concerning light Polarization Use of the interferometer Study of ether Study of color Effect of length and tension of string upon vibration Velocity of sound Spectrum analysis and absorption of light Study of the spectrum and the spectroscope

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* Summarized from The Elementary School Teachers' Reports, 1899-1900). (Note the absence of reports for the oldest children [Group XI]. This is typical of the paucity of evidence about features of this last and important level.

CHAPTER XII

COMMUNICATION AND EXPRESSION

The third curriculum area was called "Communication and Expression." It included reading, writing, literature, foreign languages, number work and mathematics, and the arts. Rather than trying to recount the details of each part, we shall concentrate on a description of the rationale which held together this disparate group of studies.

The thematic idea which made it possible to see unity in such a range of content was derived from Dewey's theory of the social origins of knowledge. He saw rough parallels between the way that learning developed and the evolution of civilized experience.

Where the child is concerned, Dewey had argued that there are four basic impulses on which to build:[1] (1) the social impulse, rooted in the need to communicate something about a social situation, (2) the constructive, (3) the investigative, and (4) the expressive(with the latter two growing out of the first two). It was held that the child has a basic need to express himself in activity and to share and tell the results of his activity. For the young child this might be by means of daubs of color on paper, a figure made of clay, a house of blocks, or recounts of his day's doings. Under the stimulus of the desire to communicate, he searches out and welcomes all means of letting others know what he has done, felt, and experienced. He seeks many ways of expressing himself more effectively. The optimum psychological time to teach him the techniques of communication is when his need for them is compelling.

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[1] Katherine C. Mayhew and Anna C. Edwards, The Dewey School (New York, D. Appleton-Century Co., 1936), pp. 336-337.

A. Reading and Writing

One of the hypotheses was that the skills of reading and writing could be taught most effectively when the child was ready and saw the need for them. In Dewey's school teachers did not begin by teaching four and five year olds to read and write. The children were provided with activities that gave them a chance to engage in creative play, to construct, to explore media of expression, to raise questions, to extend their experiences through planned excursions, to engage in simple dramatic re-enactments, and to communicate ideas in story and discussion. From the occupations as a center, they were led to raise questions and engage in the types of studies described in the sections on history and science. Dewey assumed that traditional approaches promoted negative attitudes toward learning and were wasteful in general. The child's mind was dulled by premature, unrelated drill; time was wasted on formal techniques, which were important, but which prevented the child from being introduced to more positive subject matter. The move toward more formal study of reading and writing came as children had to make these resources part of their own equipment. As we have seen, the theory held that the general time for sharpening techniques and skills was as the second stage approached (ages 8-9).

Another way of putting it was that Dewey advocated a basic change in attitudes toward the school child.[2] Instead of seeing him as someone to be instructed, educated, or amused, he was to be viewed as a young human being with genuine interests and questions of his own; willing and able to explore his world in a variety of ways. The job of the teacher and school was to weed out what Dewey called "saw dust" stuff and provide the child with things that he could take seriously. If the school provided the young child with opportunities for sensory-motor pursuits and a rich range of exploratory activities, the child would have no difficulty in taking to reading, writing, and number work. These skills would simply be additional and necessary tools for adequate expression. To master them would require the same kind of care and practice needed to refine the control of tools in the shop.

Laura L. Runyon, before she became an outstanding teacher in the Laboratory School, described a portion of her first visit.

> I met one of the teachers in the hall and besought her to tell me about the school: whether they had days or hours when they really

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[2] John Dewey, "The Results of Child-Study Applied to Education," Transactions of the Illinois Society for Child Study, Vol. I, No. 4 (January, 1895), p. 18. Cited in Mayhew and Edwards, op. cit., pp. 474-475.

> used books: whether Dr. Dewey believed children ought to learn how to read, write and cipher, or whether the new education was a preparation for Tolstoy's socialism. She said that Dr. Dewey believed the time spent in an elementary school on reading, writing and arithmetic could be more profitably spent; that an average child could learn these in doing other things.[3]

Mastery of typical readers and the ability to print one's name were not first-month goals of the School, but language, as a means of social communication, operated in the School from the child's first day. Students were encouraged to share their experiences, report on their projects and activities and to relate information accurately and distinctly. They were coached informally in diction, enunciation, projection, and so forth. Inhibitions were eradicated early by giving them frequent opportunities to report orally before the class and to participate in school assembly programs.

An example from The Teachers' Reports may serve to illustrate some of the techniques and to indicate the attitudes the teachers employed in analyzing the results.

> The materials for the reading lessons for this group have been taken chiefly from their history with occasional changes to other subjects....
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> Their lessons have been presented for the most part on the blackboard with some typewritten leaflets. It has been found to be much easier to hold their attention to the blackboard work than to the other. Their interest in each other's work as that of the group as a

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[3] Laura L. Runyon, "A Day with the New Education," The Chautauquan, Vol. 30, No. 6 (March, 1900), pp. 590-591.

whole is very slight, so that when each has the whole lesson in his own hands it is difficult for them to respect each other's claims upon the attention of the teacher and the group. With blackboard work the constant sense of expectation due to the frequent erasure of one set of sentences in order to make room for another helps to keep up their interest in something beside their individual opportunities for reading aloud. In order to insure alertness of attention, they are sometimes asked to watch while work is put upon the blackboard and then after it has been quickly erased, tell what it said. This is of service also in guarding against the danger of mere word-calling into which their reading constantly tends to degenerate. For a similar reason there has been only a sparing use of phonics, new words being associated instead with as vivid an image as possible of the realities for which they are the symbols. The work of this group confirms the results of former experience -- the conviction that the effort to make out words by sounding during the first months of reading is likely to result in a fatal division of attention. For instance, a few days ago one of the brightest children in the group, after being allowed to "sound" the new words in a sentence six words long, was unable to look away from his paper and tell what he had read until the fourth or fifth attempt.

Comparatively little writing has been done, the reasons being lack of blackboard room and of proper conditions for the use of paper and pencils and also the fact that the children tire very quickly. The general tendency seems to be towards very fine writing with a correspondingly cramped position of the fingers. An effort has been made to overcome these faults by encouraging them to write large letters that can be seen across the room and by showing them that the writing takes less muscular effort if the chalk is held lightly. One child was so delighted with this discovery that he insisted on erasing all his work and doing it over in the new way.

A notably successful lesson was the result of a talk about the making of their looms.

> Sentences were put on the blackboard by the teacher as the children gave them and read and reread by the class. A list was made of the new words, chiefly names of tools, and a drill upon these was given by acting out the uses of the various tools, individual children being chosen to direct the action by pointing to certain words or to find on the blackboard the name of the tool which the others were using. The children were delighted with the lesson. The next day they were eager to write the new words and spent the entire period at the blackboard without signs of fatigue. They called this writing "putting tools into their shop," and one boy insisted upon buying each tool from the teacher before he wrote its name, -- gravely proffering imaginary money and insisting that the tool be wrapped up in paper and duly delivered.[4]

It is difficult to say just how effective these approaches were since the kinds of evaluative procedures now available were not in existence. The reports and examples of work produced indicate that many of the children were facile and creative in verbal expression. Although they read widely, some of them had the conventional difficulties in spelling and in using correct grammatical expression. We must remember, though, that these were children from professional families.

There are fair questions that could be asked: Did the theory tend to cause teachers to be reluctant about introducing children to formal instruction in reading until later than necessary? How effective was the formal instruction and drill when it was given? People with the professional training required to make judgments on such matters would need to examine the records. It would have to be recognized, too, that this was a genuine pioneer effort. It is obvious that the emphasis on the importance of enriching and utilizing the child's experience as a basic factor in learning the three R's has become an intrinsic part of modern methods.

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[4] Margaret Hoblitt, "Reading: Group IV," Elementary School Teachers' Reports. Unpublished (March, 1900), pp. 301-303. In the archives of the University of Chicago Laboratory School.

B. Number Work and Mathematics

The approach to the study of numbers and mathematics was determined by the theory of the role of mathematical symbols in the evolution of the mind of the race, and of the child.

At the pre-primary and primary level work in arithmetic was designated as "number work."[5] Numbers were seen as symbols for handling aspects of the world and as a means of communication. The pre-school child lives in a world where simple counting is necessary. This is reinforced by nursery rhymes, such as "One, Two, Buckle my Shoe." When the four year old comes to school he has had a background of experience in the language of number, although he is not familiar with the more technical forms of unit measurement. The psychology of number was seen as similar to the psychology of language since both are forms of communication in which conventionalized symbols are used to express ideas. Both arise out of the need to get ideas across about something important in the physical or social world. The job of the School was to provide a series of situations which demanded the use of number symbols. Because of the fundamental character of mathematics, its development was one of the main concerns of the planners of the curriculum.

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[5] Mayhew and Edwards, op. cit., pp. 339 ff.

During the early stages, the problem was to see that children had many occasions to use numbers as a way of getting order and effectiveness into their activities, games, and constructions. In cooking, for instance, the child first had to count out spoons and forks. Later he learned that one cup of flaked rice took one cup of water. He found, through experimentation, that other cereals required four times as much water for proper cooking. In planning meals he then had to work out the amounts of water needed for different cereals. He could do this only with numbers, and in making comparisons, he was dealing with the idea of ration. Concrete manipulations of quantity, including comparisons of weights and distances, was followed by practice in more definite uses of enumeration and relation in order to control results. Units of measurement were introduced in the work of the shops and garden. It was assumed that, in carpentry, cooking, sewing, etc., the child could get a sense that the language of number provides a means for rendering many activities orderly and effective. Thus, he could gain insight into the ways men employ numbers in social life.

The theory assumed an analogy between the child's progressive experience with number, and the origin and development of number in human history. The hunter had to count his game, or the herder his flocks. Territory had to be measured off in primitive agriculture and track kept of changes in the seasons, the movements of the sun and moon. More refined tools required more precision in the use of them.

> The growing accuracy and precision as applied to the particular facts of experience, leads to number, in the form of more counting and aggregation. The definite laying off of materials and selection of energy, leads to a more refined form of counting known as measurement. Here, in other words, we have the beginnings of mathematical science: its function being, on the one hand to inventory existing resources, and on the other hand to define these resources with references to their possible use in accomplishing some desired end.[6]

This way of viewing the nature of number was used to stimulate interest in the origins of measurements of various kinds. The study of the Phoenician culture, at age eight, presented the historical basis of alphabets and numerical systems.

Because of their needs, it was assumed that children of this age desired greater facility in handling numbers.

> They gladly submit to drill in order to attain such facility. If they are allowed

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[6] Dewey, Lectures for the First Course in Pedagogy, No. 6, p. 4.

> to discover for themselves such things as the place of digits, tens, hundreds, etc., in our system of notation, they work out their own rules for adding and subtracting, multiplying and dividing. When a child in the school found it necessary to add 1/3 and 1/4 of a foot he proceeded in natural logical fashion from the known to the unknown. He knew one foot as 12 inches. He then consulted the ruler and saw that the 1/3 is 4 inches and that 1/4 is 3 inches, or 7/12 of a foot....at this stage he was given the terms numerator and denominator and understood that the figure above the line tells the number of parts taken, while the one below tells how many of these parts there are in the unit. As the work often involved the use of fractions the child liked this new and convenient tool....The ability to abstract and formulate began gradually at about nine years of age.[7]

The study of the stages of growth led the people in the School to believe that age ten represented a peak point of interest in developing skills for the sheer pleasure of manipulation. Because children of this age thoroughly enjoyed playing with numbers, this year was an important one for helping them acquire easily many basic skills and techniques. When learning the multiplication tables, they also tackled division. One student volunteered the information that if the division tables were the opposite of the multiplications tables, you could prove the answer of multiplication by dividing it by the multiplier. The children received great pleasure in checking this idea. They wanted to go on immediately to long division so that they could prove multiplication problems in which the multiplier contained more than one figure.

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[7] Mayhew and Edwards, op. cit., pp. 342-343.

The hard and fast distinctions between arithmetic and algebra were broken down in various ways in order to show that algebra is generalized arithmetic. Letters were used to represent quantities when writing formulae; for example, base x rate = percentage (b x r = p). In weighing, the idea of an equation was given as a way of representing the gravitational power of the earth on objects. The earth pull of weights (designated as a + b + c on one side of a scale) were shown to equal, in balance, the earth pull of the unknown weight of an object (x) on the other side.[8]

In later years work in algebra included involution, evolution, the theory of exponents, and operations involving radical quantities. In geometry each member of the group worked out, for the most part independently, from twenty to thirty propositions and wrote up demonstrations with varying degrees of care.

In the second quarter of the year's work for the fourteen and fifteen year olds, students used Wills's Essentials of Geometry as the basis for study. The propositions of the first book and many of their related exercises were covered -- about one hundred in all. The remainder of the quarter was devoted to algebra with the study of radical equations, quadratic equations, and the theory of quadratics. It was felt that it was probably a mistake to try to study algebra and geometry in the same year. Some students lacked ready command of fundamental principles and processes. Others did not study long enough to acquire familiarity with the application of the principles.[9]

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[8] Ibid., p. 343.

When it came to a systematic study of mathematics and mathematical concepts in the later school years, Dewey advocated an approach similar to that of history: the evolutionary approach. In The Psychology of Number Dewey said that the only way to answer a question like "What is a triangle?" is to find out how the triangle came to be.

> I venture the statement that (putting aside the few with the inborn mathematical instinct) higher and secondary mathematics is to the majority of students a practical riddle with no definite intellectual content in itself. What meaning it possesses it has got by way of attained practical facility in solving problems; or through its applications to other sciences or engineering. It will hardly be denied that the educational value of mathematics is not realized until its concepts and methods have a definite intellectual content of their own. Can this be secured save that as the methods of instruction follow the evolution of the process out of its cruder psychical forms to the more finished?[10]

Morton White theorizes that "Dewey took the constructivist theory of mathematical concepts....and worked it into a genetic or evolutionary approach."[11]

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[9] Ibid., p. 239.

[10] John Dewey, "Psychology of Number," Letter in Science, N.S., Vol. 3 (February, 1896), p. 288. (Reply to Henry Burchard Fine's review of McLellan and Dewey's Psychology of Number, 1895.)

[11] Morton G. White, The Origin of Dewey's Instrumentalism (New York, Columbia University Press, 1943), p. 68.

This is illustrated in an early article, "How do Concepts Arise from Percepts?" His thesis was that "the concept arises from the percept through realizing the full meaning im-plied, but not ex-plicit in the percept."[12] He used the triangle as an example. As a mere percept it is regarded wholly as a particular thing. Knowledge of that triangle would be exhausted in getting its particular dimensions, degree of angles, lengths of sides, and so forth.

> Suppose the mind advances beyond the particular triangle to the thought that there is a principle involved in the triangle; that the triangle, like everything in the world, is made upon a certain principle which is embodied in it; that this principle furnishes the plans and specifications according to which anything must exist in order to be a triangle at all. What shall we call this principle which constitutes the particular thing a triangle, rather than a pumpkin or a stove-pipe, it is this principle we really mean by triangle, and are attempting to know? Well, it is this principle which forms the concept "triangle." The concept "triangle," in other words, is the way in which three lines are put together; it is a mode or form of construction.[13]

Dewey concluded that the meaning of a concept can be grasped only in and through the activity which constitutes it. The way to get to know the concept of triangle is to go through the act of putting it together. The generality of "triangle" lies in the fact that it is a mode of action, a way of putting things together. Just so, a particular cotton loom consists of specific parts, but the loom in its functioning is not particular -- it is the concept, loom.

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[12] John Dewey, "How do Concepts Arise from Percepts?" The Public School Journal, Vol. 11 (November, 1891), p. 128.

[13] Ibid., pp. 128-129.

So he argued that the percept is knowledge in an accidental, or limited, way, while the concept "means complete knowledge of an object -- knowledge of its mode of genesis, and in its relations and bearings."[14] But the concept always returns and enriches the percept. If one once sees the process by which a triangle becomes a triangle, one can apply that knowledge to each particular triangle. This really involves the ideal of every science. "Our knowledge of the individual is limited until we have got at the principle involved in it. Our knowledge of the principle is imperfect (abstract) until we see how the principle acts under the multitude of different circumstances."[15] Dewey then drew a pedagogical moral which permeated the work of his school. The genuine way to lead students from percepts to concepts is first to present the percept in its genesis -- in its origin and growth, and in its proper relations. For the child, it is not necessary that all the abstract relations be pointed out. What is important is that "the object be, as it were, done over and over again; let the relations in it be used; let the mind act in accordance with the principle involved; and sure ground is laid for the conscious apprehension of the concept later." The teacher's work is to see that the child's mind goes through the constructive process involved in the concept. Later the process itself can become an object of reflection. "First the process used by the mind; then the process consciously thought is always the normal psychological method."[16]

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[14] Ibid., p. 129. (Author's italics.)

[15] Ibid.

At the lower levels the approach to number was somewhat incidental to other activities and studies. The intention again was to move toward abstractions in specialized mathematics at the secondary level, but the kind of concern for working out the "structure of mathematics" that characterizes recent approaches is not noticeably in evidence. The "method of discovery," however, was constantly operative. To a non-expert, it would appear that the methods imployed paralleled, to an extent, some of the principles involved in the "new mathematics" a half century later. One thinks, for example, of current advice that experience with basic techniques and concepts should precede formal instruction, or of a basic dictum of a recent program: "The Project assumes that the ability to discover patterns in abstract material is one of the most essential mathematical skills -- quite possibly the most essential skill."[17]

C. Literature

Literature, poetry, and drama were presented throughout the curriculum. Yet the records on this subject are quite scanty compared with those on history and science. Dewey rarely wrote on the topic and then only briefly. We shall speculate later on the causes of this. First, we turn to an analysis of the conception of the nature of literature, and to an overview of selected features found in the program.

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[16] Ibid., p. 130. (Dewey's italics.)

[17] Robert B. Davis, "A brief Introduction to Materials and Activities." Unpublished Madison Project, Syracuse University and Webster College, 1962, p. 8.

In the Seventh Lecture of his First Course in Pedagogy (1896) Dewey made one of his most explicit statements about literature.[18] He described it in relation to his sociological theory of history. The basic drive in man's history, he argued, was the effort to increase control over his world for social ends. Broadly conceived, this could be seen as the source of the advance of experience, in science and invention, in industrial and political developments, and in the moral and spiritual life. After examining the place of history in the curriculum, he asked, "What then is literature?"

> Literature is the outcome of man's social experience. It is the record of his consciousness of the value contained in that experience. There comes a time when experience is so laden with meaning that the dead weight ....of this meaning breaks through the outer form in which that meaning is bound up. It becomes possible for men to see that their experiences have a value which goes beyond their momentary occurrence....Literature is thus the expression of man's consciousness of the more permanent and enduring values of his experience....[19]

Employing the genetic approach, Dewey maintained that at a primitive level literature consists of tribal traditions formulated to help a society maintain its continuity -- to keep track of itself. It represents both a summary of past social events and beliefs and the organizaing of that material for educating the young.[20] As such, literature is as much a social institution as the forum or temple with which it is most closely associated. He asserted that this direct connection between social life and literature is broken as social consciousness becomes more complex, but even then literature is primarily history more idealized. The ancient Greeks, for example, deepened their social insights so that they saw their history in a much more flexible way than is the case in African tribes. Instead of a mere recounting of past events, the central interest for the Greeks shifted to a concern for the spirit, or inner meaning of their life. This does not mean; however, that literature was divorced from cultural life, but rather that it served to clarify and purify the social life being expressed.

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[18] Dewey, Lectures for the First Course in Pedagogy, No.7,pp.3-4.

[19] Ibid., p. 3.

Dewey argued against an individualistic conception of literature as inspired utterances of great geniuses, speaking truth somehow or other apart from their culture.

> ....[It] must be insisted that the conception of literature as the interpretation of life ought to give the standard for the place of literature in education. Literature as a key to life behind it, or as a mode of interpretation, deserves all that has ever been said in its favor. But literature

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[20] See, for example, C. M. Bowra, Primitive Song (New York, New American Library, Mentor Books, 1963). Bowra studied the seed roots of literature in the songs of primitive peoples that reflected their lives and superstitions.

> taken not as a mode of introduction into primary experience, but regarded as something in itself....is futile and forced ....at best it is a mere luxury for those who have the leisure to devote themselves to a highly specialized cultivation of certain refined emotions; while at worst it reduces itself to sentimentalism. Between the worst and the best it always has at least a tendency, when made a thing by itself, and not an organ of interpretation, to substitute second-hand and conventional ideas for original and vital experience, and thus to substitute artificiality for reality.[21]

In Dewey's interpretation, literature is intimately connected with the whole fabric of cultural life, and it has indirect bonds with science and industry. Unless the individual has had rich experiences with "the fundamental activities connected with life, and has secured some insight into the conditions and processes which make this life possible, he cannot have obtained the background of experience necessary to make literature pregnant with meaning."[22]

Pedagogically, literature, drama, and poetry were seen as aspects of communication and expression in which children should be participators and creators as well as appreciators. For the young pupils, verbal and written expression grew out of their work in the occupations and other studies, particularly history. Children were constantly required to formulate the meaning of their experiences. It was argued that anyone who expresses clearly, in conversation or writing, his own vital experiences is an artist --

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[21] Dewey, Lectures for the First Course in Pedagogy, p. 4.

[22] Ibid.

a producer, not a mere absorber of the expression of others.

The four year olds recounted stories of their trips and activities and acted out the parts of stories read to them. The five year olds dramatized aspects of social occupations. After a dry goods store had been visited, for example, the children enacted the roles of the cashier, clerks, and delivery boys. Teacher and students together worked out simple reading lessons based on these experiences. In Group IV, the seven year olds, in connection with the study of primitive history, were read The Story of Ab. They then re-enacted it and supplemented the story with other material learned from history. The story of Abraham and Lot was read to illustrate the character and problems of sheperd life. The children retold the story one year and printed it in large type on the school press for a reading lesson. In the study of early civilizations, other examples were drawn from the Bible. Selections from Homer were used to illustrate the social and political life of the early Greeks, including reference to their occupations.

When the eight year olds studied the Phoenicians and the great explorers, they read the best stories available on Marco Polo, Columbus, Magellan, and others. They were always making oral reports, presenting dramatic re-enactments, and writing accounts. At one time, the ten year old students wrote a textbook in arithmetic in which they composed their own problems based on work in the shop, the kitchen, science experiments, and so forth. The records indicate that Group IX (age 12) became interested one year in the logic of the syllogistic statement and composed their own examples. The write ups of experiments in science and the field excursions were considered an intrinsic part of work in written expression. The thinking behind this practice is indicated in the following quotation:

> Is it not somewhat artificial to make grammar and language study the chief repository of the structure of the intellect, to the neglect of that magnificent logical apparatus exhibited in modern modes of investigation and verification? Can the average child best lay hold of and realize the laws of reason through a study of a relatively dead product in language, or through their constant personal use in the discovery and statement of truth?[23]

For the older children, the tendency to study literature in connection with other studies continued. Mrs. Dewey, who taught English, followed this approach. When the children were reading Caesar's Commentaries in Latin, she had them study Shakespeare's Julius Caesar. The play was acted out, the characters studied, and two children debated the comparative virtues of Brutus and Cassius. In the year when the European backgrounds of American Colonization were undertaken, the social life in Shakespeare's time was included. An overview of English history from the War of the Roses to the Tudors was conducted with an intensive study of Shakespeare's Richard III. The meaning of the Renaissance and the Reformation was studied through lives of leading personages, including Erasmus, Sir Thomas More, and Martin Luther.

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[23] John Dewey, "Review of William Torrey Harris, Psychologic Foundations of Education," Educational Review, Vol. 16, No. 1 (June, 1898), pp. 13-14.

Some transition toward granting literature a more independent standing at the secondary level was contemplated, but experiments in that direction had not gotten underway by the time Dewey left.

There is no doubt that a variety of experiences with literature were included that belie the characterization of the school as a place where children played, or did what they pleased. The relatively small amount of attention given to literature may be explained by the fact that it fell less neatly within the basic rationale than did history or science. The unifying theme of the evolution of social experience forced literature to occupy a role that was less than convincing. The interpretation of literature as an expression of cultural life is legitimate as far as it goes. It rescues literature from an effete role in school studies. The functional-genetic method, however, had certain restrictive effects on the approach to the humanities. Unity of curriculum design was maintained, but in this case, at a price. Whether literature could have been conceived in a more generous spirit when the secondary school curriculum was to be planned can only be a matter for conjecture.

D. Foreign Languages

Foreign language study began in the Elementary School with the ten year old children of Group VII. They studied Latin and French, and a few of them, German. The method employed would now be described as the aural-oral approach. The children were taught to understand the meaning of words from their connections with objects or actions rather than their English equivalents. They learned the Latin words for the parts of their bodies and other objects in their environment. After a sufficient number of nouns had been mastered, a few active verbs were taught, with the teachers performing the actions. Fables and stories, such as "Pyrrhus" and "Regulus," were read and re-read to attune pupils' ears to the sounds of words and the cadence of word combinations in sentences. Miss Margaret Hoblitt, teacher of Group VIII, reported:

> In taking up a new story the children first learned the new words, each being associated so far as possible with the appropriate object, action, or quality. For instance, verbs were acted out for them and nouns presented in connection with the corresponding object. The new words were put into their notebooks, and their spelling learned in spelling matches. By means of writing from dictation, answering in Latin questions on the story, etc., the children grew familiar with the Latin before they attempted to translate it into English, and in some cases were able to tell the story in Latin without having made any conscious effort to commit it to memory.[24]

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[24] Margaret Hoblitt, "Group VIII," The Elementary School Record, Vol. 1, No. 3 (April, 1900), pp. 93-94.

Primary importance was attached to visual and oral experiences with the language. This provided the base for the study of grammar, declensions, and conjugations. As grammatical examples arose in reading and conversation, time was taken out to understand the rule which governed a particular tense. Another report of Miss Hoblitt illustrates the approach:

> In Latin, after a review of the stories in the previous year, the children took up the study of parts of the sentence, work in Latin and in English going hand in hand. The children learned quickly to distinguish the subject, predicate, and object, calling the subject the "actor" and the verb the "action" word. Some time was spent in making clear by means of illustrations the idea that some verbs require an object, or word to show the person or thing that receives the action. The next step was to indicate the value of the Latin inflection. Simple Latin and English sentences were put upon the blackboard in the natural and the inverted order, until the children discovered that, while in English the change of order -- for instance from "The girl loves the doll" to "The doll loves the girl" -- involves also a change in meaning, in Latin this was not true. Applying their recently acquired knowledge of the parts of the sentence, they discovered that in words like puella the final ă, when short, indicates the "actor" case, and am that of the object....[25]

At one time, the same person taught Latin and English to make a correlative study of word derivations and problems of syntax and grammar. Formal study of English grammar was coordinated with foreign language study.

The more advanced classes, before reading Caesar's Commentaries, read his biography from Viri Romae. In connection with the study of the Gallic Wars, a detailed examination of Caesar's time was made, of its outstanding men, and of the social, intellectual, and political events. As we have seen, this was done in conjunction with the study of Shakespeare's Julius Caesar.

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[25] Ibid.

In French, the beginning method was conversational.[26]

E. The Arts and the Aesthetic

> Art is not an outer product nor an outer behavior. It is an attitude of spirit, a state of mind -- one which demands for its satisfaction and fulfilling a shaping of matter to new and more significant form. To feel the meaning of what one is doing and to rejoice in that meaning, to unite in one concurrent fact the unfolding of the inner life and the ordered development of material conditions -- that is art.[27]

The Dewey School provided a wide range of materials and experiences in the arts: the visual arts ("fine" and practical), music, drama, and literature. In conception, though, the aim was not to develop skills in these areas as isolated activities.

> The ideal of the school was that the music, the literary and dramatic efforts of the children, and their artistic expression whether in design, in wood, metal, or fabirc, in the graphic or plastic arts -- all should represent the culmination, the idealization, the highest point of refinement of all the work carried on.[28]

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[26] For accounts of the foreign language program, see Mayhew and Edwards, op. cit., pp. 198, 240-241, 354.

[27] John Dewey, "Culture and Industry in Education," The Educational Bi-Monthly, Vol. 1, No. 1 (October, 1908), pp. 1-9. Quoted in Mayhew and Edwards, op. cit., pp. 347-348.

[28] Mayhew and Edwards, op. cit., p. 361.

In order to understand this kind of goal, one must turn to Dewey's theory of art and aesthetics. In the 1890's, his ideas on the subject were not formulated with the clarity and detail which characterized his later Art as Experience (1934).[29] One senses a struggle for expression in the early writings, but the basic themes of his later theory are present.

The task, as he saw it, "is to restore continuity between the refined and intensified forms of experience that are works of art and the everyday events, doings, sufferings that are universally recognized to constitute experience."[30] He did not want to see the aesthetic confined to the galleries and the works of the masters, but to conceive art as a dimension of experience potentially present in home, job, community, and school. An effort to sketch a part of his thesis is all that is possible here.

The origin of the artistic impulse was found in the basic nature of the activity of the organism as described in "The Reflex Arc" essay. Life is a matter of interacting with the environment in which ends are sought, in which continuity is broken temporarily, and the effort is made to restore equilibrium. Form, in a fundamental sense, is achieved whenever a new level of equilibrium is reached -- an ordered relationship with the environment is reconstituted.

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[29] John Dewey, Art as Experience (New York, Minton, Balch and Co., 1934). (Paperback reprint: New York, Capricorn Books, G. P. Putnams' Sons, 1958).

[30] Ibid., p. 3.

As Dewey saw it, the germ of the aesthetic is contained in the consummatory reordering that comes after disruption or conflict in experience.[31]

One of man's first needs was to handle raw materials. An example is found in primitive jug making. When the goal was simply to make something to hold water, a useful object was formed but it remained mechanical in spirit. A transformation occurred if the craftsman found in the coordination of hand and eye required to produce it an outlet for all his powers. The result then possessed beauty of form and outline as well as functional utility.[32]

Art, Dewey said, involves the processes of giving shape or form to material in a way that engages the interest -- the activity of the eye and hand, the ear and voice of the individual. Art, in origin, is closely connected with constructive activities. Another dimension has to do with the expression of values or ideals. It is in art that the values of a civilization are expressed. An individual attains a sense of fulfillment not only when his special abilities are expressed, but when the producer gains a sense that his work is related to the ideals of his society. This is one feature that distinguishes the mechanic as technician from the mechanic as artist. He is a technician when he produces merely for the special need at hand. He becomes an artist when he senses what his product means in terms of social value.

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[31] Ibid., pp. 14-15.

[32] Dewey, Lectures for the First Course in Pedagogy, No. 7, pp. 5-6.

> In so far....as the one who produces does not participate in the realized values of civilization and does not carry on his own work in the spirit of those attained values, his work tends to fall to a mechanical level and to be more or less servile; but no matter how small or apparently menial the thing produced, the art element, the spirit of freedom of execution and perfection of result are sure to manifest themselves, whenever the individual producer is capable of feeling himself as a social organ, reflecting in his own work the life of the community in which he belongs and contributing to its elevation.[33]

In civilizations where work is cut off from this sense of social values, art tends to be separated out as "fine art," while work is viewed merely as a mechanical process. In more integrated civilizations, the distinctions between the minor and fine arts practically disappear. Dewey offered ancient Greece and the Middle Ages as examples. In these two periods the processes of preparing food, clothing, and shelter were executed in as artistic a spirit as those employed in the great temples or paintings. To understand the Parthenon, Dewey said, one must remember "the bustling, arguing, acutely sensitive Athenian citizens, with civic sense identified with a civic religion, of whose experience the temple was an expression, and who built it not as a work of art but as a civic commemoration."[34]

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[33] *Ibid.*

[34] Dewey, *Art as Experience*, p. 4.

The aim in the Laboratory School was to approach art in a manner consistent with such ideas. Dewey reversed the traditional practice of first teaching technique and then providing for artistic expression. The very young children were allowed to explore a range of materials. In the occupations, the manual arts provided a natural medium for creative expression. Teachers were to introduce more advanced techniques as the children confronted more complex problems in art.

At the same time, artistic expression was seen as an intrinsic goal in all the studies. In 1896, Dewey formulated a lost, "Means of Developing Techniques," which illustrates the point:

> 1. Incidental criticism of products of imaginative expression.
> 2. Drawing in connection with nature study affords excellent means for development in technical definiteness and accuracy.
> 3. Drawing in connection with history, architectural reproductions mark a similar normal and intrinsic demand for the correction of crudity and vagueness.
> 4. The aesthetic interest is strong in the child and may be taken advantage of in connection with decorative design and construction.
> 5. Wherever there is any kind of manual training, there is a necessary demand, in the development of the activity itself, for correct technique.
> 6. The child may learn much from the incidental and mainly unconscious imitation of the methods used by others.[35]

Many of the studies were cooperative ventures. When these were culminated in dramatic activities, or in making murals or models, the children would be representing the social ideal of the school as a "community of learners." Such approaches were to embody the ideal of the School as a place where the arts would represent "the highest point of refinement of all the work carried on." Dewey judged that the School failed more often in this respect than in any other.[36] Artistic skills could have been developed at a higher level had the arts been handled separately, but he felt this sacrifice was justified by the effort to attain more emotional and imaginative personal fulfillment through the integrated approach.

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[35] John Dewey, "Imagination and Expression," Kindergarten Magazine, Vol. 9 (September, 1896), pp. 67-68.

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[36] Mayhew and Edwards, *op. cit.*, pp. 361-362.

CHAPTER XIII

EVALUATION AND RESEARCH

The University Elementary School was designed to be a laboratory in educational psychology. As such, its research function was an important obligation. What kind of work was undertaken?

It is fair to say that, in general, the research was not characterized by the kind of sophisticated scientific techniques available today. This may be accounted for, in part, by the fact that research procedures in the social sciences were undeveloped at the time. Only a part of Dewey's energies were available for directing the school, and, in this, much of his time was occupied with troublesome problems of finance and the need to administer the school with limited resources. It is also true that the definition of "laboratory," as applied to the school made a difference. The school was to be a place where the staff would try to work out educational practices and programs consistent with a philosophical-psychological theory, and where changes were to follow from examining work in progress. New ground was being broken. This meant that broad hypotheses, such as seeking to integrate school work with stages of child development, were blocked out. Ideas for implementation were to be employed with intelligent flexibility rather than treated as blueprints to be followed in detail. Each year practices were to be examined in terms of their consequences. Unpromising ones would be dropped, others modified, and new ideas would be formulated for the following year. Dewey visited the School almost daily during the first year.[1] His observations were supplemented by the visits of Mrs. Dewey and members of his faculty. The teachers of the school were treated as colleagues. Teachers' meetings were characterized by a free discussion of successes and failures. Teachers' records were kept as a source of data. These finally became systematized in the typewritten Teachers' Reports[2] under the supervision of Mrs. Laura Runyon.

The Directors of departments in the school were to be trained investigators with a responsibility for compiling reports as scientific findings. These were viewed as data that should be available to other investigators in education. They also were to provide a basis for effecting changes in the school. This method of putting intelligence to work for the improvement of practice certainly was consistent with Dewey's style.

One of the more striking changes that occurred in this informal mode of evaluation involved the important matter of selecting teachers and defining their roles. From what has been said to this point, it is clear that Dewey's image of teachers included the expectation that they would be students of child behavior, and capable of working in terms of psychological principles. Dewey's concern for their competence in subject matter was equally compelling. In order to effectively incorporate the content of civilization into the lives of children, teachers were needed who had thought their way deeply into the meaning of their subject.

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[1] Katherine C. Mayhew and Anna C. Edwards, The Dewey School (New York, D. Appleton-Century Co., 1936), p. 382. See Ch. XVIII in general.

[2] Elementary School Teachers' Reports (1899-1900). Unpublished. Available in the archives of the University of Chicago Laboratory School.

Various approaches were tried. One procedure that was attempted and abandoned was the self-contained classroom. On this point Dewey observed:

> As a result of experience, a chief modification has been with regard to specialization on the part of teachers. It was assumed, at first, that an all-round teacher would be the best, and perhaps it would be advisable to have one teacher teach the children in several branches. This theory, however, has been abandoned and it has been thought well to secure teachers who are specialists by tests and training -- experts along different lines. One of the reasons for this modification of the original plan was the difficulty of getting scientific facts presented that were facts and truths. It has been assumed that any phenomenon that interested a child was good enough, and that if he were aroused and made alert, that was all that could be expected. It is, however, just as necessary that what he gets should be truth and should not be subordinated to anything else.
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> The training of observation by having the child see wrong is not so desirable as sometimes it has been thought to be. The difficulty of getting scientific work presented except by those who were specialists has led to the change in regard to other subjects as well. [3]

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[3] Mayhew and Edwards, op. cit., pp. 35-36. This point is elaborated in John Dewey, "The University Elementary School: History and Character," University Record, Vol. 2, No. 8 (May, 1897), pp. 74-75.

It was recognized that there was a possible danger of swinging to another extreme. This could result in destroying a unity in the child's experience. But it was accepted as a simple impossibility that one person could be competent in all lines of work. Dewey said:

> Superficial work is bound to be done in some of them, and the child, through not having a model of expert workmanship to follow, acquires careless and imperfect methods of work. Intellectual integrity and continuity in the treatment of subject matter seemed of greater benefit than the hovering care of one person.[4]

The school sought, then, to put the various lines of work in the charge of experts who maintained agreement and harmony through continued consultation -- and cooperation. The results obtained "justify the belief that the undue separation, which often follows teaching by specialists, is a result of lack of supervision, cooperation, and control by a unified plan."[5]

There were instances of more controlled inquiry. Part of the plan for research included the idea of allowing the school to become a center for graduate study in psychology and pedagogy.

One problem assigned was to develop a sequence of school activities appropriate for the muscular coordinations of children at different stages in their growth. On the basis of discussions in weekly teachers' meetings in the first year, a sequence of activities was worked out for the different groups. Weekly time allotments were specified for gymnastics, the occupations (shop, sewing, etc.), science, history, and so forth. Decisions were made in terms of balancing the times allocated to intellectual study, to manual construction, and to artistic modes of expression, such as modeling and painting. Careful records were kept over the years and changes in scheduling effected.

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[4] Ibid., pp. 376-377.

[5] Ibid., p. 36.

One of the students in Dewey's seminar, Frederick Smedley (Director of the Child Study Department of the Chicago Public Schools), joined with A. A. Wood, a graduate student in psychology, to carry out a series of measurements of the sensory and motor abilities of the pupils.[6] These tests were planned in the University Psychological Laboratory to consider the pedagogical value of measurements in determining the right balance of types of school activities. In the introduction to a published report of these tests, Mr. Smedley wrote as follows:

> The school is a pedagogical laboratory where the students of pedagogy are investigating such questions as the correlation of studies, the psychological bearing of the different sciences to the needs of primary pupils....These tests are, I believe, a suitable beginning for a teacher who is to develop an organized, assimilated knowledge of child psychology and become a trained observer of children. It is to be hoped that the schools of the near future will be equipped with such teachers, teachers who,

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[6] Ibid., p. 389-390.

> better understanding the natures of the children, will better know their needs and be able to provide for them, and that in those schools pupils will not be promoted simply on account of their having remembered the words of the answers to stated questions. Instead health, strength, quickness and accuracy of intellectual activity, and the acuteness and education of the senses will determine, in part at least, the child's fitness for higher and harder work.'
>
> The psychological tests involved much labor, but helped in determining a right balance in the time which could profitably be spent in the typical activities of the program.[7]

In later years, studies were made to discover the stage of growth at which self-consciousness appeared. These seemed to show that conscious differences in interests and attitudes between boys and girls, except in isolated instances, were not marked until after age eleven.

The groundwork for educational experimentation was prepared, but there was nothing to compare with the wave of statistical measurements that were employed when Charles H. Judd became Director in 1909.

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[7] Ibid., p. 390.

CHAPTER XIV

SECONDARY AND HIGHER EDUCATION

Dewey wrote a brief account of the Laboratory School at the end of the first year in which he expressed his intention to extend the work to include secondary education.

> Work in the secondary period is not as yet provided. Its main object, however, is more formal differentiation of various groups of study so that the individual pupil shall secure a well balanced introduction into the whole region of human attainment, and also knowledge of the special direction in which his own interests and abilities lie, so as to prepare him for specialization in advanced work or in actual life. The secondary period really extends to the end of the present sophomore year in college. But naturally the University School is concerned with it only during its first three years. This secondary epoch is the time for formulating in generalizations the chief principles which are fundamental to various lines of study, and for amassing the detailed stores of information which embody and illustrate the general principles. If the elementary period has been adequately lived through, so that the child has secured positive experience in all these directions, has had intellectual hunger kept alive and quickened, and has acquired working use of the main lines of investigation, there is no doubt that a very large amount of technical generalization and of special detail, can easily be acquired in a comparatively short time.[1]

During the 1890's, two distinguished secondary schools became affiliated with the University of Chicago: the South Side Academy, founded with the University in 1892 as a preparatory school, and the Chicago Manual Training School, established in 1883, which joined the University in 1897. By the end of the decade, these were placed under Dewey's jurisdiction as Chairman of the Department of Education. At first he had little direct control over them, but with the forming of the School of Education in 1901, they were united as the University High School. They were brought together in a functional way only with the opening of the new Belfield-Blaine complex of buildings in the fall of 1903. We shall say more on this subject later. Here we simply wish to note that Dewey was acquiring resources for expanding educational experimentation into the secondary level. His preoccupation with the Elementary School and his other responsibilities precluded his giving systematic attention to problems of the high school in the early years. The opportunity to turn seriously in that direction came for the first time as he began what was to be his last year in Chicago.

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[1] Dewey, "The University Elementary School: History and Character," p. 75.

A result is that we have a different kind of record where Dewey's ideas for secondary and higher education are concerned. At the elementary level a full-fledged school was in operation. The value of his ideas for elementary education can be measured, in part, against the performance of the school. Where secondary education is concerned, Dewey formulated ideas which never met the test of practice. We have a record of these in a number of printed speeches and articles he wrote during and after the Chicago episode. For the most part, they concnetrate on an analysis of the nature and origin of problems confronted by the high schools. Some general principles are outlined that point to hypotheses he presumably would have favored, but there is a disappointing paucity of detail. Enough is there to indicate that American education would have had a special challenge had Dewey not left the field.

We shall attempt an analysis that includes: (1) Dewey's interpretation of the historical origins of problems confronting the American High School, and (2) a review of his plans to include secondary education within the program of the Laboratory School.

A. The Background and the Problems

> The modification going on in the method and curriculum of education is as much a product of the changed social situation, and as much an effort to meet the needs of the new society that is forming, as are changes in modes of industry and commerce.[2]

Dewey referred here to education in general, but the statement has special relevance for his description of the problems of the high school and college. We are reminded of his sociological analysis of the occupations in "The Savage Mind" article where he argued that pervasive changes in mind, character, and institutions accompany fundamental changes in the nature of man's work, or mode of gaining a livelihood.

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[2] John Dewey, The School and Society, revised ed. (Chicago, University of Chicago Press, 1923), p. 4.

Related to the thesis are his strictures against the waste in education; a waste due to the failure (1) to relate the educational program to out-of-school social reality, and (2) to coordinate randomly multiplying studies within the system.

Simply put, Dewey's thesis was that a new America had come into being since the Civil War which made the former concept of the schools obsolete and inadequate.

The expansion of capitalism together with revolutions in science and technology had transformed the nature of production and commerce. "Manufacturing was split up into a very great variety of separate processes through the economies incident upon extreme divisions of labor."[3] These drastic changes in the organization and operation of mass industry were responsible for great upheavals in the social order. Industrial specialization had its counterpart in a fragmented urban situation. While the home and village gave way to the large city as the center of production, the population center shifted markedly from the rural to the urban area. His thesis is supported by figures which show that in 1840 only one-twelfth of the American people lived in cities of 8,000 or more. By 1860, the proportion of city dwellers had grown to one-sixth, and by 1900, to one-third of the population. Census figures indicate that nearly one-half of the people in the United

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[3] John Dewey and Evelyn Dewey, Schools of Tomorrow (New York, E. P. Dutton and Co., 1915), pp. 240-241.

States in 1910, 46.3% lived in urban areas.[4]

Not only were native Americans forsaking their farms for employment in the cities, but rising demands for labor were also luring millions of immigrants to the great industrial centers of the United States. Between 1880 and 1900, nine million immigrants entered the American mainstream. With the increased growth of trusts and corporations, great wealth was concentrated in the hands of the upper echelons of the managerial and ownership groups. Within the expanding urban areas, there were depressingly low standards of housing, health, and sanitation.

Fierce power struggles accompanied these transformations, but there were also embattled efforts to advance democratic ideals. These included efforts to attain dignity for laboring people and wider access to social participation. As Dewey put it:

> The change that....overshadows and even controls all others is the industrial one -- the application of science resulting in the great inventions that have utilized the forces of nature on a vast and inexpensive scale: the growth of a world-wide market as the object of production, of vast manufacturing centers to supply this market, of cheap and rapid means of communication and distribution between all its parts ....population is hurriedly gathered into the cities from the ends of the earth; habits of living are altered with startling abruptness and thoroughness; the search for the truths of nature is infinitely stimulated and facilitated, and their application to life made not only practicable, but commercially necessary. Even our moral and religious ideas and interests, the

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[4] Charles Beard, Contemporary American History (New York, The Macmillan Co., 1914), p. 247. (The Bureau of the Census defines as urban any town over 2,500.)

> most conservative because the deepest-lying things in our nature, are profoundly affected. That this revolution should not affect education in some other than a formal and superficial fashion is inconceivable.[5]

The debate over how the schools should respond to this revolution began before Dewey's work at Chicago and has continued without abate to the present.

B. Dewey's Analysis of Problems in Secondary and Higher Education

Dewey described the general educational situation as one of confusion. Extension of knowledge accompanied the creation of a technological society. The schools were confronted with an expanded population clamoring for entry. As the system grew rapidly and subject matter proliferated, there were pressing demands for the addition of new offerings in the academic areas, e.g., modern languages competing with Latin and Greek, natural sciences and the newer social sciences challenging classical studies. Multiplication of subject matter of the more familiar type was compounded by the entry of more practical work -- manual arts, commercial and vocational subjects at the secondary level; journalism, agriculture, forestry, engineering, etc. -- in the universities. Voices were raised in alarm; the schools were the target of bitter criticisms from all sides, at all levels.

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[5] Dewey, The School and Society, pp. 5-6.

In the face of continuing attacks and in the absence of any clear insight into the sources of the trouble, educators responded by giving way to one pressure and then another.

> Consider the wave by which a new study is introduced into the curriculum. Someone feels that the school system of his (or quite frequently nowadays her) town is falling behind the times. There are rumors of great progress in education making elsewhere. Something new and important has been introduced; education is being revolutionized by it; the school superintendent, or members of the board of education, become somewhat uneasy; the matter is taken up by individuals and clubs; pressure is brought to bear on the managers of the school system; letters are written to the newspapers; the editor himself is appealed to to use his great power to advance the cause of progress; editorials appear; finally the school board ordains that on and after a certain date the particular new branch -- be it nature study, industrial drawing, cooking, manual training, or whatever -- shall be taught in the public schools. The victory is won, and everybody -- unless it be some already overburdened and distracted teacher -- congratulates everybody else that such advanced steps are taken.
>
> The nest year, or possibly the next month, there comes an outcry that children do not write or spell or figure as well as they used to; that they cannot do the necessary work in the upper grades, or in the high school, because of lack of ready command of the necessary tools of study. We are told that they also are not prepared for business, because their spelling is so poor, their work in addition and multiplication so slow and inaccurate, their handwriting so fearfully and wonderfully made. Some zealous soul on the school board takes up this matter; the newspapers are again heard from; investigations are set on foot; and the edict goes forth that there must be more dril in the fundamentals of writing, spelling, and number.[6]

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[6] John Dewey, "The Situation as Regards the Course of Study," Educational Review, Vol. 22 (June-December, 1901), pp. 29-30.

As Dewey pictured it, changes were made in a mechanical, piecemeal way with each item viewed in isolation from the rest. In the absence of some unifying philosophy, he argued that there could be no relief from this unbecoming manner of designing the curriculum. He did not claim to have a full-blown answer, but he was convinced that the chance for a more orderly procedure was dependent on insight into underlying social changes that were the source of the pressures.

Conflict and perplexity were not in themselves bad if they could be used as a spur to new resolutions. There was no virtue, though, in sheer disarray. Where secondary and higher education were concerned, Dewey directed his attention to analyzing the origins of the leading problems.

In the year that the South Side Academy and the Chicago Manual Training School were being incorporated into the School of Education, Dewey presented a paper to the Conference of the Academic and High Schools Affiliated or Cooperating with the University of Chicago entitled, "Current Problems in Secondary Education."7

He acknowledged that honest men were divided along two lines. One group committed to the existing school system, held that reforms should be made within the traditional framework; others clamored for more radical changes to adapt the school to contemporary social needs.

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7. John Dewey, "Current Problems in Secondary Education," The School Review, Vol. 10 (January, 1902), pp. 13-28.

Dewey said that each stood for significant values that could not be eliminated. In order to illustrate his point, he proceeded to analyze several related problems of the high school.

The secondary school, he said, could not ignore its articulation with the elementary school and the college or university. It was the link between them. Its peculiar difficulties and responsibilities were set by this intermediate position, for it was at the center of pulls from divergent historical traditions. On the one side, the modern elementary school represented a response to the ethical demands of democratic trends. Prior to the revolutions at the end of the eighteenth century, it was a wooden device for teaching the three R's to children of the lower classes so they could be of useful service to the established order. The upheavals of the eighteenth and nineteenth centuries included a profound aspiration for intellectual and moral opportunity and development, as well as political equality. Rousseau and Horace Mann were reformers who represented demands for a revision of elementary education so that it would serve human development instead of narrow utilitarian ends. The expansion of the high school, going on apace at the time Dewey spoke, was in part an outgrowth of this democratic drive. It stood, he said, as an institution in which the common man sought to realize his aspiration to a higher level of human dignity.

But the high school had been affected profoundly by other traditions. It was connected with the tradition of higher culture of the learned class. As such, it represented an aristocractic ideal. The universities had been the repositories of wisdom and enlightenment of higher learning. The secondary school had its origin as a preparatory institution for higher studies. Dewey added:

> I do not mention the tradition of learning kept up in the universities of the Middle Ages and the higher schools of the Renaissance and refer to it as aristocratic for the sake of disparaging it. Eternal vigilance is the price of liberty, and eternal care and nurture are the price of maintaining the precious conquest of the past -- of preventing a relapse in Philistinism, that combination of superficial enlightenment and dogmatic crudity. If it were not for the work of an aristocracy in the past, there would be but little worth conferring upon the democracy of today.[8]

The high school was the product of the meeting of these two forces. More than any other part of the educational system, it had the task of effecting an adjustment. The basic problem which affected all levels (but which was most acute in the high school) was how to reconcile the popular demand for adequate education and training with the desire for the conservation and use of higher learning which was the primary concern of a minority.

A second problem was related to the first: the high school's role as a preparatory institution for the universities versus its terminal role in preparing students who left it to enter life. A happy formula in the 1890's was the proposition that the best preparation for college was also the best preparation for life. Dewey said that the repetition of such slogans obscured the genuine problems. He argued that forces were at work which might bring new solutions appropriate for the society that was emerging.

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[8] *Ibid.*, p. 19.

Here we take a brief detour to comment on Dewey's analysis of the relations of higher education to the elementary and secondary schools. In an address to the Harvard Teachers' Association (1901),[9] he referred to the educational consequences of the change from a pre-industrial society to the scientific-technological society emerging in the twentieth century. He stated that when most of the world's work was done by manual labor, the educational system reflected the dual order of society. The masses received a rudimentary education (if any) for utilitarian purposes while a literary-classical education in an ancient tongue was the prerogative of the leisure class. When science and technology and a complex industrial-urban apparatus became the dominant order of things, profound changes in education were inescapable. Science became the great transformer. It was inevitable that the content and methods of science would take their place in education alongside the older studies. In addition, new courses of a technical nature were demanded as the increasingly complex technology and larger bureaucratic institutions required new levels of skill that could not be acquired incidentally on the job. New aspirations of people in an open society led to demands for educational experiences that would aid them to realize their capacities as individuals and to advance in the social system.

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[9] John Dewey, "Are the Schools Doing What the People Want Them to Do?" Educational Review, Vol. 21 (May, 1901), pp. 459-474.

Dewey said that both the high schools and the colleges were reflecting these changes in 1900. The role they had played in a pre-industrial stage could not be retained in the new circumstances. He saw hope, as well as possible danger, in the situation.

In his 1902 address, he came at the issues in another way as he raised a third question about the high schools. Which subjects are to be taught in the high school, and how much time is each to receive? How much time is to be given to mathematics, classics, modern languages, history, English, and the sciences? Dewey avoided a direct confrontation by saying, "To adjust the respective claims of the different studies and get a result which is at once harmonious and workable, is a task which almost defies human capacity."[10] The problem, he said, had been growing more vexing for a generation. But before a consensus could be achieved, urban high schools had to confront still another question -- whether commercial and manual training programs could be made an organic part of the curriculum.

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[10] Dewey, "Current Problems in Secondary Education," p. 22.

Dewey offered the hunch that the pressure of these newer practical programs, instead of making the problem overwhelming, might reveal the underlying social realities which were mandating educational change. He ended his address with a final paragraph that was both hopeful and elusive.

> In the future it is going to be less and less a matter of worrying over the respective merits of the ancient and modern languages; or of the inherent values of scientific vs. humanistic study, and more a question of discovering and observing certain broader lines of cleavage, which affect equally the disposition and power of the individual, and the social callings for which education ought to prepare the individual. It will be, in my judgment, less and less a question of piecing together certain studies in a more or less mechanical way in order to make out a so-called course of study running through a certain number of years; and more and more a question of grouping studies together according to their natural mutual affinities and reinforcements for the securing of certain well-marked ends.[11]

A basic issue was smouldering behind all of these problems. At the heart of the matter was the question: What is a liberal education under these new conditions? Was it to be inclusive or exclusive? Could practical or technical studies be embraced within a liberal point of view, or were the two to be seen as different in nature, to be cultivated in separation?

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[11] *Ibid.*, p. 24.

In his 1902 paper, Dewey barely moved beyond raising the questions. We must turn to a later statement to find him trying to give more direct answers. In 1931, he delivered, at Harvard, the Inglis Lecture on Secondary Education, "The Way Out of Educational Confusion."[12] While this lecture falls outside the Chicago years, the thesis developed in it can be understood only in terms of the ideas developed during Dewey's earlier work.

In the Inglis Lecture, Dewey returned to the questions he had raised thirty years before. The confusion and the debate over educational policy had become chronic -- at a level of intensity unparalleled in the past. Conservatives who wanted a return to past standards and ideals and radicals who urged innovations and departures were agreed on only one point: they deplored the present state of things. Dewey tried again to show that the roots of the problem lay in the changing social situation. The burning question was: What should be the nature of the curriculum in the high schools and universities? During the first three decades of the twentieth century, subjects had continued to multiply both in the academic area and in the technical or vocational category. The issue still concerned the relation of liberal to technical studies. Dewey suggested that one way of getting at the source of the conflict was to consider the matter of what is the way of organizing studies for purposes of instruction or learning; or, more specifically, "What is the value of the accepted and generally current classification of subjects -- meaning by 'subjects' such titles as appear in any high school and in any college catalogue?"[13]

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[12] John Dewey, The Way Out of Educational Confusion (Cambridge, Harvard University Press, 1931).

The titles, such as history, geography, algebra, and botany, Dewey said, are based on the assumption that the material summarized in each provides the natural occasion for the act of studying. The name tags imply there is something fixed under each lable. When the material to be "covered" gets too unwieldy (as it inevitably did), pieces were broken off and became new courses. There was no end in sight to this academic course explosion.

When it came to organizing material for instruction, Dewey admitted that the expansion of knowledge certainly had contributed to the spawning of courses. But if one examined the actual processes involved in extending knowledge, a significant factor was present, he said, which was overlooked by planners of school programs. Specialization was accompanied by cross references, interdependencies, and interrelations. These processes of inquiry and research went on under hyphenated headings: astro-physics, bio-chemistry, geo-physics, or terms like physiological psychology, physical chemistry, and so forth. The types of investigations pursued required the utilization of concepts and materials from related areas. Yet, in the teaching of subjects, material was presented without giving students a sense of the exciting kinds of interaction that marked the work of researchers. Knowledge and knowledge creating had become interdependent; studies had become isolated and independent. Thus, mathematics remained for most students a vexing set of operations and symbolic formulae apparently devised *ad hoc* with little reference to the way mathematical concepts and processes apply, for example, in physics.

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[13] Ibid., p. 4.

Dewey had stated in another article on secondary education that:

> ....two principles [are] continously at work in all human institutions: one is toward specialization and consequent isolation, the other toward connection and interaction....
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> A certain degree of isolation of detachment is required to secure the unhindered and mature development of any group of forces. It is necessary in order to master them in their practical workings. We have to divide to conquer. But when the proper degree of individualization is reached, we need to bring one thing to bear upon another in order to realize upon the benefits which may be derived from the period of isolation. The sole object of the separation is to serve as a means to the end of more effective interaction.[14]

He was arguing that in curriculum building the first principle -- that of specialization -- was being applied to the neglect of the second -- the need for connection.

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[14] John Dewey, *The Educational Situation* (Chicago, University of Chicago Press, 1902), pp. 53-55. See "As Concerning Secondary Education," pp. 50-79.

This was more serious to the extent that students were exposed to a static organization that kept them from gaining insight into the processes of interaction that characterized work on the frontiers of knowledge.

> In a situation where the skills of arts and the subject-matter of knowledge have become interwoven and interdependent, adherence to the policy forming the studies of secondary and collegiate instruction on the basis of many isolated and independent subjects is bound to result in precisely the kind of confusion we have at present.[15]

The same situation applied, he said, in the industrial or practical arts.

> In operation they are often immensely specialized in detail. But back of the operations there lies a concentration of knowledge derived from many sources, an integration of many processes which originated in separate arts.[16]

Educational confusion had not been lessened by the addition to the universities of technical or practical subjects like journalism, commerce, engineering, teaching, pharmacy, agriculture, forestry, library service, domestic arts, and their counterparts in the high schools. Their intrusion had sharpened the debate between the cultural, humanistic ideal and "practical" goals and operations.

Dewey acknowledged that there were genuine differences between these newcomers and the traditional trinity of law, medicine, and theology. The latter, of course, had centuries of development behind them. It was also true that these had originated as schools to turn out practitioners. They still prepared students to make a living in a competitive society. That was true, too, of liberal studies, especially in their function of furnishing teachers.

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[15] Dewey, The Way Out of Educational Confusion, pp. 17-18.

[16] Ibid., p. 17.

The important question, though, was why vocational and semi-vocational courses had gained momentum. Did they reflect the sick values of a materialist society? Were they the product of secret plotters? The answer, Dewey said, was not hard to find:

> The arts and technologies by which the life of society is maintained are now so affected by and saturated with applied science that the routine apprenticeship methods of the past no longer serve. Somehow and somewhere there must be organized instruction concerning them.[17]

There is no doubt that students were attracted to them partly to "get on" in life; even though what they got usually disappointed them. The fact was that subjects of this kind were socially necessary. Until they were planned and executed properly, students would find in them neither efficient instruction, nor a liberalized, humane experience.

Many deplored the existence of these courses as diversions of attention, money, and energy from scholarship and humane learning. Dewey acknowledged that as far as the actual occupations of men are not affected by the values and perspectives of the liberal ideal "they will be narrow and hard, tending not merely to the 'utilitarian' in its restricted sense, but even toward the brutal and inhuman."[18]

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[17] Ibid., p. 22.

But there was a danger, too, in adhering to a traditional concept of liberal studies in the new scientific-industrial setting. If conceived as something precious and esoteric, to be preserved and conducted apart from the main directions of modern life, they could become "genteol," enfeebled, and devoid of vitality. Their devotees could retreat into bitterness; Minniver Cheevy types.

Dewey referred to remarks by President Arthur E. Morgan (of Antioch College) to summarize his point:

> In so far as the liberal arts college stands for a perpetuation of the traditional conflict between vocation and culture, it seems doomed to play a constantly decreasing role in education. In a day when most of the occupations of men involved little more than manual skill and the repeated application of a few rule-of-thumb formulae, the concept of vocational as illiberal may have had some basis. With the modern applications of all the sciences and arts to vocations, and the successful scientific search for principles within the operations and purposes of the vocations themselves, it is no longer true. It is rapidly becoming a fact that study within one's vocational preparation is an important means of freeing and liberalizing the mind. This being true, the inevitable trend in education is toward the rapid thinning of the traditional educational wall between vocational and cultural. The liberal arts college will survive and render service in proportion as it recognizes this fact and brings its course of study and administrative set-up into effective conformity with it.[19]

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[18] *Ibid.*, pp. 26-27.

[19] *Ibid.*, pp. 27-28.

These remarks, Dewey said, applied with equal force to the high school.

Dewey rejected the idea that there was any single and easy answer for education in the new America. He was convinced that the new technical offerings were not to be dismissed with academic curses. He was not defending them as they often existed. But, he argued, there was a genuine possibility of developing a humane, liberal outlook in connection with the practical activities of life and the chance to make culture truly vital for the many might be found there. The real question was not whether professional and semi-professional schools should exist as part of general education in the United States, but what such programs were to contain, and how they should be taught. Dewey, thus, was returning to his concept of the occupations as educational centers for social insight.

Dewey opposed vocational education that would be limited to the mere acquisition of job skills. This was inefficient, he said, because new advances in technology continually made such abilities obsolete. Besides, a limited, utilitarian approach was unworthy of self-respecting, free workers. Dewey did propose a general training that concentrated on the underlying principles of industrial processes and their social significance rather than in the mere know-how of printing, carpentry, metal-working. He saw rapid technological change and the consequent large-scale mobility of the laboring population as facts that:

> ....cry aloud against any trade training which is more than an incidental part of a more general plan of industrial education. They speak for the necessity of an education whose chief purpose is to develop initiative and personal resources of intelligence. The same forces which have broken down the apprentice system render futile a scholastic imitation of it.[20]

Dewey stated that it would not be easy to develop secondary education so that semi-vocational courses would absorb the liberal training and the social and scientific outlook that were needed. A major obstacle consisted in finding teachers who shared this view. The arranging of programs that involved more than mere training required patient and thorough inquiry and testing. Impatient demands for "trained hands" without liberal falderal would compound the difficulties. The proper reply to this latter pressure, Dewey maintained, was to acknowledge the fact that no school can give complete technical competence. Practical details must be learned on the job. When the schools do what they can do well, ie. give insights into scientific and technical concepts and principles and reflection on social relations and values, "they will become more genuinely practical as well as more liberal."[21]

Liberal education, Dewey said, must renounce its nostalgic stance if it is to play a vital role in the new society. At the same time, the tendency to be swamped by the proliferation of new courses must be resisted. He maintained that the situation was so complex that there was no simple, single answer. He did offer the hunch, however, that for purposes of instruction, alternatives had to be tried based on organization other than that represented in the traditional divisions and classifications of knowledge.

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[20] John Dewey, "A Policy of Industrial Education," New Republic, Vol. 1 (December, 1914), p. 12.

[21] Dewey, The Way Out of Educational Confusion, pp. 29-30.

One alternative, he said, might be found in the so-called "project" or "problem" methods being tried in the elementary schools. He offered this as no panacea, for he found that many projects were too trivial to be educative. They failed to deepen acquaintance with facts and principles. It was dishonest, though, he felt to seize on a few failures in order to discredit a general idea. Dewey felt that there was a genuine possibility of locating projects appropriate to the experiences of students at the secondary and college level which had a sufficient time span for raising questions, introducing new undertakings, and creating fresh demands for knowledge. Organization, in this case, involved drawing on materials from several fields to carry forward investigations. This came closer to the way study and learning go on outside of school, where data and principles are not found packaged under neat labels. Students would be provided with the opportunity to be more active in both an intellectual and a constructive sense.

They would be forced to seek their own integrations and solutions.[22]

Dewey hastened to add, "I do not urge it [the project approach] as the sole way out of educational confusion, not even in the elementary school, though I think experimentation with it is desirable in college and secondary school."[23]

Another alternative that he suggested was to retain traditional titles but reorganize content to take into account the interdependencies of knowledge with emphasis on meaning and application. As an example, he cited Julian Huxley's work on life and evolution. One finds him hearkening back to his own undergraduate career where the elder Huxley had set him off on an intellectual adventure that he had never ceased pursuing. Properly designed, such organizations would not sacrifice scientific accuracy and could quicken intellectual curiosity and understanding.

> After all, the period from, say, fourteen to twenty-two is a comparatively short portion of a normal life-time. The best that education can do during these years is to arouse intellectual interests which carry over....If a student does not take into subsequent life an enduring concern for some field of knowledge and art, lying

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[22] Dewey did not mention specific examples but one such would be the Antioch plan at the college level, or work-study plans in the high school where efforts are made genuinely to raise questions which integrate intellectual inquiry with practical experience.

[23] *Ibid.*, p. 36.

> outside his immediate professional preoccupations, schooling for him has been a failure, no matter how good a "student" he was....
>
> A reorganization of subject matter which takes account of out-leadings into the wide world of nature and man, of knowledge and of social interests and uses, cannot fail save in the most callous and intellectually obdurate to awaken some permanent interest and curiosity. Theoretical subjects will become more practical because more related to the scope of life; practical subjects will become more charged with theory and intelligent insight. Both will be vitally and not just formally unified.[24]

In sum, we find Dewey projecting the case for new ways of bringing liberal and humane values into the educational system of a democratic, industrial-urban society. Typical of his abhorrence of dualist solutions was his opposition to a concept of liberal education that would make it merely the abstract conservator of the values of a former social setting; while vocational education would be developed in a narrow, utilitarian sense. Such definitions led to a schism that, in his view, was not inevitable. To isolate them could heighten the unhealthy tendencies in each and could lead to a missed chance for each to be revitalized by the other.

Dewey's hopes for the liberalizing of professional and semi-vocational studies can be understood only in view of his ideas about the nature and role of the occupations in the Laboratory School. As opposed to the mere acquisition of saleable skills, serious study of the nature of man's work provided an avenue for educational experiences that could throw light on many aspects of the culture. If historical trends, technological innovations, social changes in family and community, and moral, spiritual, and aesthetic dimensions were to be understood in depth, all of the knowledge and methods of liberal and scientific studies would be required. Dewey never relinquished his conviction that the study of social life through a comprehensive analysis of work-forms or occupations could revitalize liberal studies -- and the quality of students' experiences in school.

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[24] Ibid., pp. 38-39.

> The problem is not that of making the schools an adjunct to manufacture and commerce, but of utilizing the factors of industry to make school life more active, more full of immediate meaning, more connected with out-of-school experience.[25]

It is easy to become impatient with Dewey's failure to provide concrete details on how to achieve these goals. We must remember, though, that after leaving Chicago in 1904, his role was that of a professional philosopher. The philosopher's task is to frame questions that enable men to understand their situation anew and to see the values at issue. He is not in a position to work out the practical details.

Dewey's analysis of the social situation with its call for new approaches to integrating the liberal and the technical might have been in error. This is a fair subject for debate. Perhaps the demands of specialized knowledge and training are such that viable efforts to frame educational programs that seek integration are impossible. This observer feels that Dewey's analysis is cogent and still warrants serious attention. An important quality in Dewey's own writings must be remembered if this be true. Dewey had opinions, and he did not always present alternatives in a completely objective light. In the main, though, he avoided dogmatic assertions that only a single approach offered the one true solution. He did not maintain that an idea was good because it was new. He acknowledged that innovations sometimes were mis-educative when they were shallowly conceived, or when they lacked the personnel and conditions to be executed adequately. His style was to recommend the analysis of the situation, and from that to develop reasonable ideas to be tested. When we weigh the costs of the ill-tempered vituperation that has prevailed about the issues he discussed, we may find some virtue in Dewey's more even tempered tone.

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[25] John Dewey, Democracy and Education (New York, The Macmillan Co., 1916), p. 316.

C. Plans for Secondary Education in the Laboratory School

We have examined materials which give a clue to the types of emphases Dewey envisioned for American high schools and universities. However, we cannot find in his Chicago expreience detailed plans as to how he would have tried to integrate the secondary school with elementary and higher education. There is available, though, an address which Dewey made in his last years which contains the kinds of ideas he was projecting for future work in education.

The address was delivered to the combined Parents' Association in the academic year 1903-1904,[26] the first year that the School of Education and its Elementary and Secondary Schools were housed in the new Blaine-Belfield buildings on campus. All of the aspects of work in education were now brought within unified quarters. It was a time of new problems, but also an occasion for reflecting on the meaning of past developments and for conjecturing about the road ahead. Since this speech is a record of Dewey's intentions, it is worth examining in detail. Its content becomes intelligible, however, only in terms of events that had transpired in the history of the Elementary School since its opening in 1896. We shall preface our consideration of his 1904 paper with an overview of relevant historical developments.

In his report to President Harper (1898), Dewey said, "The Department of Pedagogy, from the first, included in its scheme of organization a plan for a school which should take children at the beginning of school life, or four years of age, and carry them into the University."27

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26. John Dewey, "Significance of the School of Education," The Elementary School Teacher, Vol. 4, No. 7 (March, 1904), pp. 441-453.

27. John Dewey, "The University Elementary School," Reports to the President, in the archives of the University of Chicago, 1898, p. 232.

Dewey had to move slowly toward the goal of including secondary education as part of his experiment. The University's alliance with the Chicago Manual Training School and the South Side Academy in the 1890's was a first step in this direction.

At the turn of the century, a series of events took place that led to a further expansion of the University's efforts in education. This created tensions that eventually were to lead to Dewey's departure in the spring of 1904. In 1900, Dewey's Elementary School was four years old and a subject of national interest. At a meeting of the National Council of Education, Dr. A. B. Hinsdale of the University of Michigan said, "More eyes are now fixed upon The University Elementary School at Chicago than upon any other elementary school in the country and probably in the world."[28] Indeed, the school was well known; but because it was dependent on the contributions of friends, it was chronically in financial straits. At one point, in 1899, in the continuing correspondence between Dewey and Harper over financial problems, Dewey suggested that if more evidence of support from the University's Board of Trustees was not forthcoming, he favored disbanding the school.[29] Then chance intervened.

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[28] Ida B. Depencier, The History of the Laboratory Schools: The University of Chicago 1896-1957 (Chicago, University of Chicago, 1960), p. 16.

[29] John Dewey, Letter to William Rainey Harper, March 8, 1899, The President's Papers, University of Chicago.

In March, 1901, Colonel Francis W. Parker's Chicago Institute, a successor to the Cook County Normal School which Parker had directed for eighteen years, was incorporated into the University as The School of Education. This was done at President Harper's invitation, at least partly to help relieve the financial problem of the University. Colonel Parker was, of course, an educational innovator who, at the level of practice, championed ideas similar to Dewey's. The Colonel was a stormy reform figure. When the Cook County Normal School was taken over by the city of Chicago in 1896, many of his ideas came under attack and his work was threatened. In 1899, he received a million dollars from Mrs. Emmons Blaine, daughter of Cyrus McCormick, who offered to support his work in a private school to be known as the Chicago Institute. President Harper, shortly thereafter, invited Colonel Parker and his faculty to join the University. Parker accepted and brought with him the million dollars. A proviso of the Trustees of the Chicago Institute was that in the move Colonel Parker was to remain as head, and his program of a pedagogic school, an elementary school, and a kindergarten should remain intact.

The Dewey Elementary School now seemed threatened; and its friends, locally and nationally, exerted pressure on Harper to maintain it as a separate school with its research and experimental features intact. This was a time of upset and friction. Personnel of the two schools felt threatened and rumors abounded. Finally, by the opening of the academic year in 1901, Parker was installed as Director of the Chicago Institute and the School of Education. Dewey remained as chairman of the Department of Education. His school, now officially to be referred to as the Laboratory School, was to be maintained alongside Parker's University Elementary School.

Colonel Parker became ill in the fall of 1901 and died in March 1902. During this period, the Chicago Manual Training School, headed by Henry Holmes Belfield, and the South Side Academy, under the direction of William B. Owen, were brought into the new School of Education. These secondary schools were under Dewey's jurisdiction, and upon Parker's death, Dewey was assigned to coordinate these combined operations as the newly appointed Director of the School of Education. By 1903, the two elementary schools were united under the principalship of Mrs. Dewey. However, she was unacceptable to Parker's people and Harper decided not to reappoint her for September, 1904. While Dewey denied this was the reason for his resignation, it was part of the picture of worsening relations between the two men. Dewey did resign in April, 1904, without another job. He soon was to accept an offer to join the Department of Philosophy at Columbia University where he completed his professional career.

Gifts from Mrs. J. Young Scammon and John D. Rockefeller, Sr., in addition to money from Mrs. Emmons Blaine, made possible the launching of a new complex of buildings in 1901 that was to eventuate in Blaine, Belfield, and Judd Halls. This brought together quarters for the School of Education, the Elementary School, and the new University High School. After arduous planning and labor, the new quarters were ready for occupancy in the fall of 1903. The first class graduated from high school in June, 1904, the spring in which Dewey resigned.

This hasty sketch provides some background for the paper that Dewey presented to the Parents' Association in the winter of the first year of the new school.[30]

The address is revealing in two respects. First, it provides insights about the objectives Dewey would have pursued had he continued to have a major commitment in education. Secondly, by reading between the lines, we can see aspects of the prickly administrative difficulties he confronted at that moment.

In many ways his new problems were the products of success. As Dewey began the academic year 1903-1904, he finally had within one complex all the ingredients for educational experimentation, from the kindergarten through University graduate work that he had sought from the beginning. He also had awesome professional responsibilities.

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[30] Dewey, "Significance of the School of Education," pp. 441-453.

By now he was firmly established as a front ranking American philosopher. The outlines of his instrumentalist orientation had been blocked out and demanded elaboration. While he retained his position as Chairman of Philosophy and Psychology, with Parker's death, he found himself Director also of a vastly expanded School of Education. This included the graduate functions of his old Department of Education, now supplemented by a sizable undergraduate Normal School operation that accrued from the addition of the Chicago Institute. All of this was accompanied by a pre-collegiate operation which included the new Elementary School born of the merger of his own Laboratory School and Parker's lower school, and the University High School. This was a far cry from the primary school which had begun with twelve children in a private home seven years earlier and had been temporarily disbanded for lack of funds at the end of its first term.

Each of the pre-collegiate schools had been pioneers in American education. This meant they had been led by strong men who had attracted creative and independent-minded faculties. The rancor, hard feeling, and mistrust that marked the joining of Parker's program with Dewey's Department of Education verged on explosion at times. Dewey and Parker had admired each other, and shared many ideas in common, but the intellectual and value orientations of their two schools also contained sharp differences. An obvious one was Parker's emphasis on teacher training as opposed to the research dimension in Dewey's program. In addition, there were the usual concerns about faculty security and the jockeying for administrative authority which accompanies mergers. Dewey had no real stomach for these matters. With the many pressures he faced, his communications with the Parker faculty were, at times, faulty. Mrs. Dewey's appointment as Principal of the Elementary School was a particular thorn of contention, and Dewey himself had low respect for Wilbur S. Jackman of the Parker group who, in the re-shuffling, had become Dean of the College of Education under Dewey's Directorship.

Dewey expressed confidence that he could handle these complexities. Whether this was a realistic assessment is a moot point. The present writer is willing to leave the issues of the organizational struggle to those scholars who explore these questions in detail.

In view of this background, it is safe to assume that Dewey's remarks to the Parents' Association were framed, in part, to promote unity. The parents themselves had strong loyalties to the several schools that were brought together. If they were to split into fierce partisans of the several divisions, they could exacerbate wounds already present. Dewey used this occasion to honor the contributions of the past, to create a sense that the time was fit to bring the parts together, and to ask the parents to join with him in working on a new set of problems around which they could unite. We may admit the note of diplomacy in the speech and still find it helpful to see the vision Dewey was projecting. He made observations on each of the schools represented and argued that their inclusion provided the reconstituted School of Education with a unique opportunity. The various elements represented the areas in which the major theoretical problems of education were present. "....We have right here in concrete actual institutional form all the factors which any writer on education of the present day would lay down as involved in the problem of education."[31]

He began with comments on the two divisions of the School which he listed as first in historical order. In 1883, Colonel Frances W. Parker came to the Cook County Normal School and Henry H. Belfield had opened the Chicago Manual Training [High] School.[32]

By describing Parker's work as part of "our" history, he was bidding for the Parker people to identify themselves with the new organization. Colonel Parker's death, the preceding spring, still was felt sharply by those who had stood by him in his long, harsh struggles.

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[31] Ibid., p. 447.

[32] For a detailed, scholarly analysis of events in these years see Robert L. McCaul, "Dewey and the University of Chicago," School and Society, Vol. 89, Part I (March 25, 1961), pp. 152-157: Part II (April 8, 1961), pp. 179-183: Part III (April 22, 1961), pp. 202-206.

The incorporation of Parker's Chicago Institute added to the new School of Education a teacher training component. Dewey described the congruencies between Parker's ideas and his own. Parker had seen, said Dewey, that "the training of teachers is the strategic point in the educational campaign."[33] Parker, too, had created as an organic part of his Normal School an elementary school, and in idea at least, a high school. Prospective teachers needed to experience personally a learning situation which in its enrichment and direction freed children for their own growth. A fundamental feature of the work of all those united in the School of Education was to give teachers a more vital conception of their profession; to do this they gave them the intellectual insights to realize their ideals in action.

Henry H. Belfield's Manual Training School provided another element. It had been a innovator in its field. Although Belfield's training had been in classics, he founded the school in protest against the tendency to equate education with the training of intellect at the expense of the "executive and expressive" aspects of youth -- "an education which took account of the employment of the senses upon the symbols of things, but not sufficiently of the use of touch and sight and muscular sense upon things themselves."[34] Parker and Belfield had shared Dewey's aspiration for the creation of approaches that utilized other than the verbal behavior of children -- of designing programs and methods that would involve the "whole child." Dewey's theory added philosophical depth to justify the idea.

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[33] Ibid., p. 442.

[34] Ibid., p. 443.

Dewey next gave his interpretation of the special role of his own Laboratory School. It was founded, he said, to apply scientific concepts and methods to school work, with the more specific focus of sponsoring research on problems connected with the psychology and sociology of education. He pointed out that with the exception of a short-lived kindergarten program at Stanford University, the Laboratory School had no predecessor. His statement about the School, on that occasion, was not only a mature appraisal, but also an elaboration of his future intentions.

> ....the incorporation of the laboratory school marks the necessity of training teachers, not only by giving them inspiration, practical insight, and skill, but by giving them command of the most fundamental intellectual tools of the work which they are called to do. Over and above this, it stands for necessity of making the body of thought upon which education depends something more than, upon one side, a set of abstract and general theories, reinforced by a large amount of routine and empirical devices, upon the other. It commits the School of Education to the significant task of continuous research into the principles underlying educational practice, and to continual criticism of methods that are in practical use, with a view to influencing intelligent thought and practice all over the country -- a function which the Laboratory School had already fulfilled to a surprising extent, considering its short history and modest equipment.

> Speaking in terms of relationship to the University, the incorporation of the Laboratory School signifies bringing to bear the intellectual methods of which the modern university is the appropriate home and embodiment, upon all the questions of education, both elementary and secondary. To infuse lower education with the intellectual ideals which inspire university work, to show how the methods and operations of mind which are so fruitful for discovery and application in the highest flights of the mind can be made effective and operative from the very beginning of the school training of the child, is surely a fact of considerable significance. All of that significance is now embodied in the life of the School of Education.[35]

Next he turned to the South Side Academy, established in 1892, as a preparatory school at the time the University of Chicago was founded. This is further evidence of Harper's support of the plan to integrate pre-college schools with higher education at Chicago. In commenting on the Academy, Dewey observed that if the School of Education were to follow the tendency of contemporary educational innovators, to concentrate on the applied aspects, or even on the scientific method in education, a serious gap would be left. He admitted that the "new" educators tended to dismiss slow-changing higher education as "medieval." In their serious hours, however, Dewey said, they had to acknowledge that the college is the noble carrier of the things necessary to a higher life. Any abatement of interest in the intangible, cultural concerns would diminish values which are most worthwhile in life.

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[35] *Ibid.*, pp. 444-445.

The task of giving information, discipline, and culture necessary for entering university work was important and honorable work. Dewey and his colleagues wielded the cudgels against the tendency for schools to become abstract and dead through the isolation of their content from the concrete, moving forces of society; but, Dewey warned that the manual and practical tendencies could easily become "cramped, servile and hard" apart from the illumination of liberal culture. The inclusion of the Academy provided the welcome values and challenges of the tradition of liberal education.

Dewey then turned somewhat indirectly to the rumors of dissension. He acknowledged that there were widespread comments about the unlikely prospects of welding such disparate ingredients into a functioning unit. He countered with what he called the organics of the school. Each element could do its work well, but with the knowledge that it was part of a larger whole. Each of the factors would act on, and in turn be affected by, all the others. The scientific and cultural, the utilitarian, and the expressive -- motor dimensions -- all were represented. Gathering them together was an achievement in itself. The great challenge of the years ahead would be to fuse them into a new concept of education in which "the executive and the abstract, the tool and the book, the head and the hand"[36] would be brought into fruitful relation.

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[36] *Ibid.*, p. 449.

He anticipated difficulties in the experimentation and asked for the sympathetic understanding of the parents.

> It will be necessary to introduce more of the physical and manual element, more of expression in art, and of construction in the shop into the academic curriculum. On the other hand,....it will doubtless be found necessary to infuse the more direct industrial and practical education with things derived from the larger outlook of history, science, and all we mean by general culture.[37]

Within a few months, he left Chicago. Never again was he to have direct contact with pre-collegiate education. Many of Dewey's appointees left when he did. The School waivered in leadership, as no director was appointed until the coming of Charles H. Judd in 1909. The elementary and secondary schools eventually were operated as completely separate organizations.[38] Under Judd's leadership, 1909-1919, a new emphasis, coinciding with the fever of educational testing sweeping the country, came to the fore.

D. Secondary Education as Related to Elementary and Higher Education

If we try to predict more specific ideas that Dewey might have introduced into secondary education, we quickly enter the realm of conjecture. Enough is contained in his writings, though, to warrant a try. Some ideas are clearly stated: on other points one may make reasonable inferences. The record is fragmentary and includes articles written over a period of years. Sometimes Dewey seemed to be trying out ideas which may never have been employed in practice. At other times, there is lack of clarity on details or apparent inconsistencies. With these warnings announced, we offer what seems to be a reasonably accurate summary of positions he espoused.

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[37] _Ibid_., p. 450.

[38] Depencier, _op_. _cit_., p. 50.

In discussing secondary education, Dewey often considered it a part of one of his larger problems: How to visualize the educational program so there would be some conceptual unity and coherence in the whole effort from the pre-primary level into the university. As we have seen, the high school was characterized as the connecting link between elementary and higher education. Its problems at the turn of the twentieth century were compounded by the fact that it now had a dual role to play. It retained its long time preparatory function. In addition, it now had a major responsibility as a sort of "people's college," where the intellectual possessions of the public which never sees the college doors could be solidified and elevated.[39] Furthermore, the high school had to get its definition in a period when the nature and content of both the elementary schools and the universities were being modified by the demands of new urban-industrial realities.

In an earlier consideration of his Elementary School program, we found one theme recurring. There should be a move from relatively undifferentiated study, centering on the nature and evolution of social life in early stages to more distinctly defined studies at the secondary level. Dewey's more detailed thesis for secondary education was that the high school is characterized by more specialization, for the child's interests and society's needs demand it. Specialization wrongly pursued, however, can lead to narrowness and monotony; therefore, the task is to emphasize the benefits of specialized work while avoiding its negative aspects. Specialized study must never lose sight of the connectedness and interaction with the whole of experience, of which the subject at hand is a mere fragment. All of this would be applicable to both academic and semi-vocational education.

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[39] John Dewey, "The Influence of the High School upon Educational Methods," School Review, Vol. 4, No. 1 (January, 1896), p. 2.

While the term "specialization" was employed, another phrase, "differentiation and generalization" more accurately conveyed the intention for the high school. "Specialization" in the sense of concentrating in depth in an academic area, and preparing for a specific profession or vocation were tasks Dewey assigned to the university.

> The movement, however, is steady, and I believe inevitable, in one direction: the demarcation of secondary work as the period of general training and culture, thus restoring to it freshness and vitality by making it what it should be, the renaissance of the individual mind, the period of self consciousness in the true sense, of knowledge of self in relation to the larger meanings of life; and the reservation of the higher institution for specific training, for gaining control of the particular body of knolwedge and methods of research and verification

> which fit the individual to apply truth to the guidance of his own special calling in life. All of us have callings, occupations -- only the luxuriously idle and the submerged idle, only the leisure class of fashion and pauperism, violate this law. When education ceases to ignore this fact, when it recognizes it frankly and fully, and adapts its curriculum and methods to it, the university will be coherent in itself and also doing what the people really want done.[40]

In a 1901 address to the Harvard Teachers Association, he said of secondary education:

> It certainly means....that the pupil shall ....be stimulated, on all sides; that he shall be given a survey, at least of the universe in its manifold phases. Thru [*sic*] this....coming to know both himself and the universe, he may get his orientation -- his placing of himself in the larger world. With proper economy of instruction, and harmonious organization instead of blind confusion in the curriculum, this result should certainly be attained by the time the average student is twenty or twenty-one....Its freshness and vitality may be restored by making it what it should be, the renaissance of the individual mind, the period of self-consciousness in the true sense of knowledge of self in relation to the larger meanings of life.[41]

Several questions had to be answered in practice: (1) how to find more time for secondary education to enable it to meet its growing responsibilities, and (2) how to reconcile the values of liberal education with the semi-vocational needs of students not bound for college.

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[40] Dewey, "Are the Schools Doing What the People Want Them to Do?", p. 474.

[41] *Ibid.*, pp. 473-474.

On the first point, Dewey argued that secondary education required a period longer than the traditional four years -- not everything could be piled into the high school.[42] One of his proposals to relieve the pressure was to revitalize the elementary program. He felt that much time was wasted in the ineffective memoriter methods of teaching the three R's. The introduction of more efficient methods for this task could provide positive subject matter. This could result in a reduction of the amount of time assigned to elementary education by a year.[43]

> ....the introduction into the lower grades of geometry and algebra taught by rational methods, in place of the numerical contortions of the average arithmetic; the substitution of literary masterpieces as wholes for the grind of continuing to read broken off fragments after one has already known how to read several years...; the extension of science work and the introduction of simple experimental and observational methods...; the introduction of foreign language work....to that degree found to be advisable to give any child command of his own powers, whether he go to college or not.[44]

He argued that the weakest point in the educational system was in the grades four through eight. These were the years when energy was consumed by repetition of drill in reading, writing, and numbers at a time when the child was ready to apply himself to new learnings. "The benumbing, mechanical influence which is the serious evil of the average American school today is in full operation."[45]

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[42] John Dewey, "Remarks on the Study of History in Schools," School Review, Vol. 4 (May, 1896), p. 272. At the Meeting of the North Central Association of Colleges and Secondary Schools at the University of Chicago.

[43] John Dewey, "Remarks on Frank Louis Soldan, Shortening the Years of Elementary Schooling," School Review, Vol. 11 (January, 1903), pp. 17-20.

[44] Dewey, "The Influence of the High School upon Educational Methods," pp. 5-6.

Dewey sometimes spoke of secondary education as extending through the first two years of college. The specific point at which he envisaged this level ending is not completely clear. What he was seeking was a large enough block of time to give the high school a chance to develop its distinctive emphases.

> A six-year period would enable the high school to face its own peculiar problem: that of opening to the mind avenues of approach to all typical phases of nature and society, and acquiring a sympathetic knowledge of these areas of life -- culture, in a word. Facing its own problem without distortion from outside pressure, it would have free space and leisure in which to work out that knowledge of the universe of nature and humanity that is worth while; and that would enable its graduates to undertake later specialization in professional and research lines in an intelligent way -- intelligent both as to consciousness of their own capacities, tastes, and needs, and as to the knowledge of the relations of the particular province to which they are to devote themselves to the whole federated field of life.[46]

On the question of how to organize studies and how to relate the liberal and vocational, we have already noted one principle stressed by Dewey: differentiation had to be accompanied by integration. This involved a search for concepts that would be useful for relating materials. The study of vocations or the nature of work was one such idea. Another one that Dewey considered was the use of psychology and sociology (or social ethics) as two studies around which others could be correlated:

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[45] Ibid., pp. 4-8.

[46] Dewey, "Remarks on Frank L. Soldan, Shortening the Years of Elementary Schooling," pp. 19-20.

> ....psychology as a concrete study of human nature in the individual, and sociology as the concrete study of nature in its organized forms, are the natural bases for the unification of studies in the high school, whether we look at the dominant interests and impulses of the pupil at this age, or at the material studied. This seems to me to constitute a fair basis for the claim that these studies would introduce order rather than confusion, work for ease rather than hardship in the high school economy.[47]

This coincided with the psycho-social orientation of the Laboratory School. A sociological approach to the study of social institutions and vocations in a culture, and a psychological study of the nature and needs of individuals could freshen the approach to other subjects. In history, for example, there could be consideration of habit, character, purposes, and motive; science could include reflection on the processes of observation, inference, and reasoning; and the study of changes in economic institutions could form a basis for unifying work in history, geography, and the sciences.

Dewey welcomed the broadening of the school population in high school and college, and he welcomed the innovation of technical and practical studies as a challenge to educational traditions. One of the hotly debated issues was whether a dual system of high schools should be established: one academic, the other vocational. Dewey vigorously opposed this separation.

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[47] Dewey, "The Influence of the High School upon Educational Methods," p. 11.

> The scheme [of a split school system] tends to paralyze one of the most vital movements now operating for the improvement of existing general education. The old time, general academic education is beginning to be vitalized by the introduction of manual, industrial, and social activities; it is beginning to recognize its responsibility to train all the youth for useful citizenship in which each may render useful service to society and make an honest and decent living.[48]

When the University Elementary School was brought together with the South Side Academy and the Chicago Manual Training School in 1903-1904, we saw Dewey welcoming the chance to work on the problems of correlating studies. The Manual Training School would have introduced to the school children from working class backgrounds. Just how the college preparatory work of the Academy would have been affected is not clear. We do know that Dewey held that it was as important for the academically-oriented, college bound student to become acquainted with tools, materials, and industrial reality as it was for the student bound for labor in industry to be exposed to science, history, and literature.[49] We know, too, that Dewey was a vigorous advocate of the comprehensive high school and it is reasonable to expect that he would have sought some common studies and experiences for the two groups of students.

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[48] John Dewey, "Some Dangers in the Present Movement for Industrial Education," Child Labor Bulletin, Vol. 1, No. 4 (February, 1913), p. 71.

[49] John Dewey and Evelyn Dewey, Schools of Tomorrow, p. 181.

We can be somewhat more confident about his emphases in what he called the semi-vocational area. He argued consistently, and as late as 1944, that:

> a truly liberal and liberating education would refuse today to isolate vocational training on any of its levels from a continuous education in the social, moral and scientific contexts within which wisely administered callings....must perform.[50]

Technical studies, when including general principles and concepts, could have a challenging intellectual content. The changes wrought by the technological revolution assured it.

> Industry has ceased to be essentially an empirical, rule of thumb procedure, handed down by custom. Its technique is now technological: that is to say, based upon machinery resulting from discoveries in mathematics, physics, chemistry, bacteriology, etc....as a consequence, industrial occupations have infinitely greater intellectual content and infinitely larger cultural possibilities than they used to possess. The demand for such education as will acquaint workers with the scientific and social bases and bearings of their pursuits becomes imperative, since those who are without it inevitably sink to the role of appendages of the machines they operate.[51]

Dewey used the term semi-vocational to indicate that no pretension would be made for turning out completed technicians. For youth coming to high school as an avenue to work, studies should permit the exploring of interests and capacities. A range of vocational experiences should be provided. In addition, every student regardless of his job orientation should be well-grounded in non-vocational subject matter. An intellectual adjustment to the political, economic, religious, cultural, and social aspects of life also had to be made. The specialization and complexity of modern industry made it ever more difficult for men to see their work in terms of the social whole. The goal he projected was a kind of education that would equip students to emerge from the schools with a broad understanding of the nature of industry and technology, a respect for the dignity of work, and an awareness of the social implications of change. They would have some insights into the nature of the economic system, of the roles of management and labor unions. Dewey thought that the introduction into industry of such a "new breed" of laborers would serve to elevate the position of the workingman and his role in society, and hence effect at least a partial bridging of the great gulf which separated the upper class from the lower class wage earners.

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[50] John Dewey, "Challenge to Liberal Thought," Fortune, Vol. 30, No. 2 (August, 1944), p. 156.

[51] Dewey, Democracy and Education, p. 314.

Dewey knew the difficulties in striking out in such a direction. It is safe to predict that he would have tried experiments along these lines, for the alternative was abhorrent to him -- schools where large numbers of working class youths found themselves "sitting through" academic courses which bored them, and, on the other hand, taking narrow vocational training which might or might not enable them to "take a job;" a job, unenriched by insights, so that they would "put in time" until the clock released them.

If he had had to grapple at first hand with the problems, he might have realized more sharply the need for imaginative and gifted teachers required to make such a program effective. This might have raised the question of how such people were to be found and trained. The teacher education dimension of the School of Education and the research function may have become involved. Once again, in the 1960's, we are realizing the critical need for leadership and quality in this field -- and the dearth of them in practice. Genuine educational vision is needed as badly here as in any aspect of American education.

We may assume that Dewey would have retained the policy, followed in the Laboratory School, of maintaining close working relations with scholars in various academic disciplines. We might have seen collaborative efforts to work out programs for learning and instruction, in the academic and semi-vocational areas, that would embody the principles of "differentiation and interrelation."

It is difficult to assess the consequences of the fact that Dewey did not have the opportunity to extend the Laboratory School idea through the high school and to struggle with the practical problems involved in relating differentiated study to the rationale of the elementary work. As the first half of the twentieth century unfolded, secondary education was to become the major arena of controversy and change. It may well be that misinterpretations of Dewey's thought occurred because his stay at Chicago permitted a full working out only of that part of his theory that applied to young children. We have pointed out repeatedly that he intended to shift emphases at the secondary level. These were never instituted in practice, and sketched in only briefly in his writings. The active methods of the occupations, and the concepts of nees and interests that were stressed in his elementary education theory represented the most dramatic departures from traditional practice. They were the aspects seized on most avidly by many of the progressive followers -- and later extended into the theory of the high school curriculum.

We have stressed, perhaps unduly so, the fact that in Dewey's own thought there was deep respect for the role of scholarship and intellectual discipline in education. To point this out is not to deny the emphasis that he placed on engaging the interests and present experience of the child. A genuine educational experience for each individual was the goal. In the Dewey School, however, the goal was not seen to be one of meeting needs in general. The professionals selected interests and needs that could be used productively in the study of civilization. Study of the curriculum materials indicates that the start often was made from the side of important concepts and events in social evolution that were deemed essential for a child's education. There is no doubt at all that only those experiences were to be included that would lead to a knowledge of nature, society, or self that was of enduring significance.

In later progressivism, this qualification was not always given sufficient weight. In the child study movement, valuable insights were gained about the needs of children. At adolescence, for example, a real concern of youngsters is with personality and appearance. Dewey's orientation did not make it defensible, however, to assume that location of a need was a sufficient ground for placing it in the curriculum as a subject of study. Hence, matters of"personality and appearance" or "hobbies" might be legitimate "needs" and educators could relate to children more effectively as possessors of such knowledge, but this would not per se earn them a place in the curriculum. If there were questionable trends in later curriculum development, the failure to work in terms of the "civilizational criterion" and to move toward more systematic study at the secondary level certainly played a role. Dewey may be asked to share in the blame for failing to make this point sufficiently clear. In Experience and Education, he came close to it. But as John Childs once said, "He marched right up the hill and then marched right down again."

Dewey's own psycho-social theory tried to reconcile tensions between the values involved in meeting the needs of individuals and the values contained in accumulated cultural experience. Dewey was convinced that these could be brought into a viable and fruitful relationship. We can only conjecture as to what success he may have had in effecting an integration of these values in a secondary school of his own. The problem has not disappeared.

CHAPTER XV

SUMMARY AND CONCLUSIONS

John Dewey would not be everyone's nominee for admission to a Hall of Fame of American Educators. There would be few, though, who would exclude him from a list of the "Ten Americans Who have Most Influenced Education in the United States." He was, without question, one of the most influential and controversial figures in the history of American education.

Even after Dewey's death in 1952, his name was prominent in the stormy debate about what policies should govern the programs of American schools in the second half of the twentieth century. There were times in his long career when he was a subject of near reverence by many educators. More recently it became popular to cast him in the role of villain. The range of impressions about what Dewey advocated for education has been extraordinarily wide. Such confusion about so important a figure in our educational history handicaps efforts to think clearly as we struggle to define policies for the years ahead. The present study was based on the hunch that we might clarify our understanding of Dewey's position if we studied his work in the ten year period (1894-1904) when he was involved directly in the educational problems of the lower schools.

We began with the intention of concentrating on an analysis of practices in Dewey's Laboratory School at the University of Chicago. This was based on the desire to check his ideas about education against the actual educational procedures which he sponsored. It became clear very early in the investigation, however, that narrow concentration on the work of the Laboratory School would be ill-advised. For, the fact is that Dewey's concerns with educational problems were inextricably connected with the work he was pioneering in philosophy and psychology. He was a leader of the movement often referred to as the "new education." His ideas about education were extensions into social practice of core concepts of the instrumentalist philosophy and the functionalist psychology which he and his colleagues were formulating.

The intellectual journey which Dewey followed in these years was determined in significant ways by events in his own past. For this reason we began in Chapter I with a review of the family and community setting in which he was reared. We examined his experiences in American schools at the elementary, secondary, and university levels, and found that he was awakened intellectually only as he approached the end of his undergraduate studies. Thinkers who raised philosophical questions provided the spark.

While still an undergraduate, he encountered a philosophical question with which he was to wrestle throughout his career. Rebelling against the dualist philosophical tradition which was represented in New England theology and philosophy, he began to seek an alternative that would unify the separations of mind and body, nature and man, moral theory and scientific inquiry. This quest was to lead him to Hegelian philosophy during his doctoral studies at Johns Hopkins. Gradually, under the influence of evolutionary theory, he abandoned Hegelian idealism and became a leader in the creation of instrumentalist or experimentalist philosophy. The central task of such a philosophy was to clarify the conditions which would maximize growth of experience. He came to see education as a proving ground where his philosophical and psychological ideas were to be put to work.

The chance to head the combined Departments of Philosophy, Psychology, and Pedagogy provided Dewey with an unusual opportunity to advance his inquiries in a university setting where he would have access to the research orientations of several disciplines. He sought to raise the quality of educational thought by bringing research procedures to bear on problems in this field. As a part of his design, he founded a school that would serve as a laboratory for experimental inquiry. He established such a school and directed it for eight years. The curriculum and methodology were planned in consultation with scholars from a number of disciplines.

Dewey and his colleagues organized their work around a number of fundamental problems or concerns:

(1) One of the major goals was to create a rationale that would provide unity and coherence for the different school levels from the kindergarten through higher education. In practice, the Laboratory School did not have a chance to expand beyond the level of elementary education, although Dewey was ready to initiate an extension of the program into secondary education at the time he resigned from the University of Chicago faculty.

(2) The major hypothesis for the curriculum and methodology was generated from the philosophical and psychological theory that Dewey and his staff were creating. Several important theses were built into the plans for the Laboratory School program. One of these was the idea that school work should be designed to correspond to stages in the development of children. Included was the concept of a progression of development in the levels of interest. In the early years of school, it was assumed that the physical, constructive, and expressive impulses were strong in children. Consequently, school experiences should be designed to give expression to such drives and interests. The teacher's role was to guide these so that they would become educative experiences. A second stage occurred when children were ready to confront more complex questions which required a higher level of learning skills. This was the stage that was judged to be most productive for learning the tools of the three R's. In the first two

stages work in science, history, and language would be relatively undifferentiated. As the child approached the end of elementary school, he entered a stage where the need for more specialized study would be appropriate. Differentiated work in the academic areas would be a mark of the school program at the secondary level -- even though themes to integrate the studies were to be sought.

(3) Dewey's idea of the genetic or historical development of social or civilized experience provided another idea which was built into the design of the curriculum. His psychological and logical theory was rooted in the basic model of an organism interacting with its environment -- the normal condition of an organism was characterized as one in which it periodically was thrown out of adjustment with its environs and, consequently, sought to establish a state of equilibrium. In human experience the environment included the social as well as the natural world. The social environment made possible a quality of behavior that included the tools of meaningful symbols. This provided the condition for developing more effective modes of behavior in the form of reflective thinking. Reflective thinking made it possible for man to guide his behavior by conscious goals and values, and it enabled him to extend his knowledge of his world through effective modes of inquiry. The various subject matters and their disciplined methods of thought were viewed as the products of such an evolutionary

development. A major task of the teaching profession was to see that this knowledge and the concomitant thinking skills would be incorporated effectively into the experience of individual students. Curricular experiences and methodological approaches were to be employed which would enable children to understand the significant factors that had enabled men to advance the quality of human experience. Students also were to be given insight into ways of behavior that thwarted or prevented possibilities for growth in experience.

A progression of studies was planned for the children of the Laboratory School in history, the sciences, and communications (languages, mathematics, and the arts) which would lead them to see the origins of human development in primitive societies, and from these to later, more advanced social levels. The effort was made to relate the content studied at each stage of civilized development to relevant aspects of the contemporary environment. Once again the sequence of studies was to move toward more differentiated work at the secondary level and beyond.

(4) One of the unique features of the Laboratory School was the role assigned to the occupations, e.g., cooking, carpentry, weaving, and gardening. The occupations were intended to be a means for integrating a variety of learning experiences and were related to various concepts in the philosophical-psychological theory.

A basic theme in the rationale for the curriculum was the study of the evolution of civilization (or social experience). Dewey's sociological interpretation of history included the assumption that many facets of the life of a society were affected by the modes of work or occupations. When changes took place in these, e.g., in a shift from a nomadic to an agricultural life, the entire pattern of the culture was affected and had to be reconstructed. Dewey saw his own period as one in which the culture was in transition from an agricultural, aristocratic, pre-scientific stage to an industrial, urban, scientific phase. By having children develop a thorough awareness of the nature and consequences of fundamental social changes in critical periods in the past, he hoped that they would develop a capacity to analyze the nature of the challenge of their own generation.

Since urban children were divorced from direct experience with the basic production processes of the necessities of life, the occupations literally would give them an opportunity "to get the feel" of the primary materials and activities which were at the root of complicated techniques of production. Their studies could lead them to see the transformations that had been wrought by inventions, and scientific, technological, and social innovations.

The occupations also fitted certain concepts of Dewey's psychological theory. It was noted that at about the age when the child entered school, he had strong impulses to act, to construct, to express himself through motor activities. The occupations could help him meet these needs. The psychological theory also held that the primary fact in learning was the bio-social self interacting with the world to meet life needs. In the occupations the child was confronted with materials, tools, and skills that presented problems and had to be mastered. He was in a position where he had to struggle at first hand to perceive relations that must be established to bring order into his world. As he advanced in school and encountered more difficult problems, he could be led to see the critical function of tool skills such as the three R's, and of the knowledge available in the organized subject matters. At the same time, he could percėive knowledge and the tools of learning as intrinsic parts of the web of human experience. Learning and knowledge were felt to be necessary to his own natural development as a human being -- and necessary in the development of human societies in general. This insight could help to eliminate the educational waste which Dewey felt resulted from the isolation of school studies from the out-of-school experiences of children.

The occupations also provided a model for a methodological approach that emphasized inductive, self-learning procedures. In the occupations and later in more formal studies, children were confronted with situations, questions, and problems which they had to resolve. They were expected to treat ideas as hypotheses and to act on them to discover relations and generalizations. These methods of reflective thinking provided the key to reconstructing experience -- or learning. Many inquiries were conducted in cooperation with other students or with their teachers. It was believed that such approaches furnished the attitudes and skills for the continuation of learning which could be employed by youth as they left school to take their places in society. Thus, the Laboratory School's procedures offered a contrast to the competitive methods of the recitation of traditional schools.

(5) Dewey also wanted to incorporate the goal of secondary education in the compasss of experimentation of the Laboratory School, but he left Chicago before this hope could be realized. His speeches and writings, however, give us clues as to his plans. In practice, studies were to become differentiated along subject matter lines, yet he was seeking themes that would show how the various disciplines were related to the broad evolution of human knowledge.

As one of their functions was to promote liberal insights, the occupations probably would have been one of the elements employed to establish continuity with the elementary school program. When viewed as the fundamental processes of work in a culture -- the processes of production, and of institutional arrangements related to them -- they could provide clues for seeing forces which give pattern and unity to a society.

Dewey also felt that the divisions of labor into an intellectual-professional class versus a subservient manual work force, which characterized a pre-scientific aristocratic stage, had to give way to new arrangements in a scientific, democratic era. All levels of useful work -- intellectual, technical, and manual -- would be transformed by a greater intellectualization in a more complex society. Intellectuals and production workers alike had to understand how their work and their society were being modified by scientific-technological advances. Dewey was searching for an educational rationale that would destroy the sharp cleavages that had separated liberal from technical-vocational studies in traditional education. His plans for secondary education included a recognition of the need for differentiated programs for those who were headed for advanced research in the universities and for those who were planning to enter the work force. But he wanted pre-vocational studies to stress experiences that would provide scientific principles and generalizations, and social insights. On the other hand, he wanted the college bound students to have some direct experiences with the machines and processes of industry, and to develop respect for the contributions of production workers. Both groups should have had educational experiences which would provide the qualities of mind that were needed to think, work, and live together effectively. Dewey's departure from Chicago and the field of education prevented him from grappling with the difficulties of trying to execute such a plan.

The purpose of this study has been to clarify Dewey's plans for education in the period when he was an educator. The limits set for the investigation prevent us from speaking with any special authority for events beyond 1904. We are not capable of making a definitive evaluation of Dewey's long term influence. However, because his work was a major force in American education, we cannot resist making some brief observations on events that transpired after he left Chicago. We include opinions both about Dewey and the progressive education movement,[1] and about Dewey and his critics.

It appears that some of those who followed Dewey in the progressive education movement failed to give sufficient weight to several emphases in his over-all design for education. However, they did pick up his recommendations for a more active, problem-centered methodology; they did search for ways of integrating the content of subject matters; they did introduce approaches that took into account the nature and needs of young children; they did develop materials and methods which provided elementary school teachers with a richer repertoire for dynamic teaching. That is not all, but this is not the place to recount the story of the progressive schools.[2] They tended to focus, however, on the ideas which Dewey had developed for the early years of elementary education. That aspect of his theory which stressed a transition in the upper levels to provide students with more differentiated studies in the secondary school was relatively neglected. The tendency seems to have been to interpolate upwards the principles advocated by Dewey for the lower elementary school without developing careful experimental work with regard to his recommendations for shifts in emphases at later stages. Curriculum innovation of this type would have required the cooperative work of various academic specialists. However, the principle of close cooperation between educationists and other academic scholars which Dewey employed at Chicago tended to fall by the wayside. A tragic estrangement came to characterize the relations of the educators and their other colleagues on campus. The reasons for this are complex. Efforts to attribute the causes to some dark conspiracy represent a travesty of the truth and are not worthy of serious attention. Nevertheless, the kind of thought and work that ensued in the field of education was affected by these developments.

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[1] It must be noted that it is impossible to provide a clear and simple definition for the concept of "progressive education." Some events that are included under this heading are derived from ideas other than those represented in Dewey's writings. There were, however, many professional educators who saw themselves as working within Dewey's orientation and who would have accepted the "progressive" label.

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[2] Much of that story has been told in Lawrence A. Cremin, The Transformation of the School: Progressivism in American Education (New York, Alfred A. Knopf, 1961).

The findings of the present study invalidate wild charges that Dewey sponsored anti-intellectual doctrines which were responsible for major ills of American schools in the twentieth century. At the same time, there were limitations in his position and he may be asked to share a measure of blame for some of the confusion and difficulties which did result. His style of writing seems to have left teachers confused as to whether they should "teach children" or "teach subject matter," for he was not specific about the problem of the curriculum content after he left Chicago. In particular, his early thesis that more differentiated study should characterize the program of the secondary school remained undeveloped. His criticisms of the child-centered excesses of some progressive schools were, in the main, gentle and infrequent;[3] he did not define sharply what the alternatives might be.

We have only hunches to offer as explanations, and these might have to stand corrected after careful investigations into the later phases of Dewey's career. He was interested in giving support to reform efforts in education which were pioneering more dynamic alternatives to the unimaginative efforts of standard schools. Schools representing the "new education" challenged many practices which badly needed to be criticized. Many of the "new" schools were financially in perilous straits and were the subjects of vigorous attacks. It may be Dewey felt that their positive contributions were deserving of support, and that for him to add his voice to the chorus of criticism would represent too severe a threat. His philosophical orientation also made him cautious about making proposals for curriculum content that had the prescriptive quality of a blueprint. Furthermore, after he left the field of direct involvement in education, he may have been hesitant to make pronouncements on details. His role became one of defining educational problems and issues as he saw them; educational practitioners were assumed to be in the appropriate position to work out the details of implementation and experimentation.

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[3] The most notable being Experience and Education (New York, The Macmillan Co., 1938).

To this observer, though, it appears that if Dewey had chosen to be a more vigorous critic of some of the progressive educational practices about which he had doubts, his criticisms might have served to stimulate important correctives which would have made progressivism less vulnerable to later waves of attack.

At the same time, an analysis of the rationale and program of his educational work at Chicago exposes the patently unfair quality of many of the recent onslaughts against him.

The charge of anti-intellectualism is especially ill-founded. One of his major efforts was to bring the study of educational problems into close contact with the research methods of other academic disciplines. The description of the subject matter of his Laboratory School revealed that one of his primary goals was to inject more substantive work into the elementary curriculum. The major thrust of his thought was to ground educational practice in the process of critical inquiry.

Fair minded readers of his writings on the subject of interest cannot miss his repeated rejection of interest as a catering to temporary whims. His definition of interest received its meaning from the context of his philosophical-psychological theory and cannot be discussed intelligently apart from that.

Dewey was one of the pioneers who advocated inductive methods or methods of discovery. It is legitimate to make refinements to such procedures as our investigations about education move ahead. It would appear to be a mark of our maturity, however, to acknowledge that there is a history supporting such efforts.

In the long run, Dewey's significance will be judged in terms of the staying power of the general psychological and philosophical theory which lay behind his proposals for education. His psychological views which centered around a bio-social concept of self and which stressed the critical role of purpose-directed human behavior, have been overshadowed by behaviorist and Freudian theories in recent decades. We would not make a heavy wager, though, that psychologists will never return to the theory advanced by Dewey and Mead at Chicago for promising leads in psychological theory.

The post-sputnik period has been characterized by an impatience with educational philosophy in a drive to achieve more effective practical results. Dewey's attempts to think about educational problems in terms of a view of the nature of man and the values of a democratic society have not been seriously pursued. Yet man seems to have a need to seek philosophical wholeness, and when he returns to such efforts, Dewey's struggles to see man in terms of an evolutionary orientation and in terms of the endless ramifications of science for human life, may again have to be confronted.

BIBLIOGRAPHY

1. Andrews, Katharine, "Experiments in Plant Physiology." The Elementary School Record, Vol. 1, No. 4 (May, 1900).
2. Beard, Charles, Contemporary American History. New York, The Macmillan Company, 1914.
3. Bowra, C. M., Primitive Song. New York, New American Library, Mentor Books, 1963.
4. Buckham, Matthew H., Report of the Superintendent of Common Schools. City Documents. Burlington, Vermont, 1897.
5. Camp, Katherine B., "Science: Group V," and "Science: Group VIII." Unpublished (January and February, 1900). In the archives of the University of Chicago Laboratory School.
6. Chardin, Pierre Teilhard de, The Phenomenon of Man. New York, Harper and Brothers, 1959. Introduction by Julian Huxley.
7. Coulter, John, "Some Problems in Education." University Record. A series of articles.
   - I. "The Act of Teaching." (May 21, 1897), pp. 65-67.
   - II. "Science in Secondary Schools." (May 28, 1897), pp. 77-80.
   - III. "Over Production of Teachers." (June 4, 1897), pp. 90-91.
   - IV. "The School and the University." (June 11, 1897), pp. 97-99.
8. Cremin, Lawrence A., The Transformation of the School: Progressivism in American Education. New York, Alfred A. Knopf, 1961.
9. Davis, Robert B., A Brief Introduction to Materials and Activities. Unpublished, Madison Project, Syracuse University and Webster College, 1962.
10. Depencier, Ida B., The History of the Laboratory Schools: University of Chicago 1896-1957. Chicago, University of Chicago, 1960.
11. Dewey, Jane M., "Biography of John Dewey," in Paul A. Schilpp, ed. The Philosophy of John Dewey (New York, Tudor Publishing Company, 1951), Chapter I.

12. Dewey, John, "The Aim of History in Elementary Education." *The Elementary School Record*, Vol. 1, No. 8 (November, 1900), pp. 199-203.

13. -------, "Are the Schools doing What the People Want Them to Do?" *Educational Review*, Vol. 21 (May, 1901), pp. 459-474.

14. -------, *Art as Experience*. New York, Minton, Balch and Company, 1934.

15. -------, "Challenge to Liberal Thought." *Fortune*, Vol. 30, No. 2 (August, 1944), pp. 155-157, 180, 182, 184, 186, 188, 190.

16. -------, *The Child and the Curriculum*. Chicago, University of Chicago Press, 1902.

17. -------, "Culture and Industry in Education." *The Educational Bi-Monthly*, Vol. 1, No. 1 (October, 1908), pp. 1-9.

18. -------, "Current Problems in Secondary Education." *The School Review*, Vol. 10 (January, 1902), pp. 13-28.

19. -------, *Democracy and Education*. New York, The Macmillan Company, 1916.

20. -------, "Education as a University Study." *Columbia University Quarterly*, Vol. 9, No. 3 (June, 1907), pp. 284-290.

21. -------, *The Educational Situation*. Chicago, University of Chicago Press, 1902.

22. -------, *Essays in Experimental Logic*. Chicago, University of Chicago Press, 1916.

23. -------, "Ethical Principles Underlying Education." Third Yearbook, National Herbart Society, 1897.

24. -------, *The Ethics of Democracy*. University of Michigan Philosophical Papers, Second Ser., No. 1, 1888.

25. -------, *Experience and Education*. New York, The Macmillan Company, 1954.

26. -------, *Experience and Nature*. New York, W. W. Norton and Company, Incorporated, 1925.

27. Dewey, *Experience and Nature*. New York, W. W. Norton and Company, Incorporated, 1929.

28. -------, *First Course in Philosophy of Education*. Lecture notes, 1896, Chapter 5.

29. -------, "From Absolutism to Experimentalism," in George P. Adams and William P. Montague, eds., *Contemporary American Philosophy* (New York, The Macmillan Company, 1930), Vol. 2, pp. 13-27.

30. -------, "Ceneral Principles of Work, Educationally Considered." *The Elementary School Record*, Vol. 1, No. 1 (February, 1900), pp. 12-15.

31. -------, "George Herbert Mead." *Journal of Philosophy*, Vol. 28 (June, 1931), pp. 309-314.

32. -------, "George Herbert Mead as I Knew Him." *University Record*, Vol. 27, No. 3 (July, 1931), pp. 173-177.

33. -------, "How do Concepts Arise from Percepts?" *The Public School Journal*, Vol. 11 (November, 1891), pp. 128-130.

34. -------, "Imagination and Expression." *Kindergarten Magazine*, Vol. 9 (September, 1896), pp. 61-69.

35. -------, *Individualism: Old and New*. New York, G. P. Putnam's Sons, 1930.

36. -------, *The Influence of Darwin on Philosophy*. New York, Henry Holt and Company, 1910, Chapter 10, "Consciousness and Experience." Reprinted with slight variations from "Psychology and Philosophic Method," *University of California Cronicle*, Vol. 2 (August, 1899), pp. 159-179.

37. -------, "The Influence of the High School upon Educational Methods." *School Review*, Vol. 4, No. 1 (January, 1896), pp. 1-12.

38. -------, *Interest and Effort in Education*. Boston, Houghton Mifflin Company, 1913.

39. -------, "Interest as related to [the Training of the] Will." Second supplement to the Herbart Yearbook, National Herbart Society, 1895.

40. -------, "Interpretation of the Culture-Epoch Theory." Second Yearbook, National Herbart Society, 1896, pp. 89-95.

41. Dewey, Interpretation of the Savage Mind." *Psychological Review*, Vol. 9 (May, 1902), pp. 217-230.

42. -------, *Lectures for the First Course in Pedagogy*. Unpublished, Nos. 1,3,4,6,7, 1896. Copy made available to the author by Professor Frederick Eby (emeritus), University of Texas.

43. -------, Letter of John Dewey to Jane Addams in the Swarthmore College Library, Peace Collection (January 19, 1896).

44. -------, Letters to William Rainey Harper, President of the University of Chicago. The President's Papers, University of Chicago (May 13, 1897: December 6, 1897: June 23, 1898: February 10, 1899: March 8, 1899: December 21, 1899: February 3, 1900).

45. -------, "Monograph No. 3 -- Textiles." *The Elementary School Record*, Vol. 1 (April, 1900).

46. -------, "Monograph No. 7 -- Manual Training." *The Elementary School Record*, Vol. 1 (October, 1900).

47. -------, "The New Psychology." *The Andover Review*, Vol. 2 (September, 1884), pp. 278-289.

48. -------, "A Pedagogical Experiment." *Kindergarten Magazine*, Vol. 8 (June, 1896), pp. 739-741.

49. -------, "Pedagogy as a University Discipline." *University Record*, Vol. 1, Nos. 25, 26 (September, 1896), pp. 353-355, 361-363.

50. -------, "The Philosopher Replies: Experience, Knowledge and Value: a Rejoinder," in Paul A. Schilpp, ed. *The Philosophy of John Dewey* (New York, Tudor Publishing Company, 1951), Chapter 10.

51. -------, *Philosophy and Civilization*. New York, Minton Balch and Company, 1931.

52. -------, *Plan of Organization of the University Primary School*. Unpublished, 1895? Copy in the William Rainey Harper Library, University of Chicago.

53. -------, "A Policy of Industrial Education." *New Republic*, Vol. 1 (December, 1914), pp. 11-12.

54. -------, "The Psychological Aspect of the School Curriculum." *Educational Review*, Vol. 13 (April, 1897), pp. 356-369.

55. Dewey, "Psychology and Philosophic Method." *University of California Cronicle*, Vol. 2 (August, 1899), pp. 159-179.

56. -------, "The Psychology of Effort." *Philosophical Review*, Vol. 6, No. 1 (January, 1897), pp. 43-56. Summarized by Harry Norman Gardiner in the *Psychological Review* (July, 1897), pp. 437-438; *Revue de Metaphysique et de Morale*, Vol. 5 (September-March, 1897), pp. 10-11; *Revue Philosophique*, Vol XLV (February, 1898), p. 220.

57. -------, "Psychology of Number." Letter in *Science*, N. S., Vol. 3 (February, 1896), pp. 286-289.

58. -------, "The Psychology of the Elementary Curriculum." *The Elementary School Record*, Vol. 1, No. 9 (December, 1900), pp. 221-232.

59. -------, "Reflective Attention." *The Elementary School Record*, Vol. 1, No. 4 (May, 1900), pp. 111-113.

60. -------, "The Reflex Arc Concept in Psychology." *The Psychological Review*, Vol. 3, No. 4 (July, 1896), pp. 357-370.

61. -------, "The Relation of Theory to Practice in Education." Third Yearbook of the National Society for the Scientific Study of Education, 1904.

62. -------, "Remarks on Frank Louis Soldan, *Shortening the Years of Elementary Schooling*." *School Review*, Vol. 11 (January, 1903), pp. 4-17, 17-20.

63. -------, "Remarks on the Study of History in Schools." *School Review*, Vol. 4 (May, 1896), p. 272.

64. -------, "The Results of Child-Study Applied to Education." *Transactions of the Illinois Society for Child Study*, Vol. 1, No. 4 (January, 1895), pp. 18-19.

65. -------, "Review of William Torrey Harris, *Psychologic Foundations of Education*." *Educational Review*, Vol. 16, No. 1 (June, 1898), pp. 1-14.

66. -------, *The School and Society*. Revised ed. Chicago, University of Chicago Press, 1923.

67. Dewey, John, and Dewey, Evelyn, *Schools of Tommorrow.* New York, E. P. Dutton and Company, 1915.

68. Dewey, John, "The Signiffcance of the School of Education." *The Elementary School Teacher,* Vol. 4, No. 7 (March, 1904), pp. 441-453.

69. -------, "The Situation as Regards the Course of Study." *Educational Review,* Vol. 22 (June-December, 1901), pp. 26-49.

70. -------, "Some Dangers in the Present Movement for Industrial Education." *Child Labor Bulletin,* Vol. 1, No. 4 (February, 1913), pp. 69-74.

71. -------, "Some Stages of Logical Thought." *Philosophical Review,* Vol. 9 (September, 1900), pp. 465-489. Reprinted in *Essays in Experimental Logic.* Chicago, University of Chicago Press, 1916.

72. -------, and others, *Studies in Logical Theory.* Chicago, The University of Chicago Decennial Publications, 1903.

73. -------, "The University Elementary School." Reports to the President in the University of Chicago archives, 1898.

74. -------, "The University Elementary School: History and Character." *University Record,* Vol. 2, No. 8 (May, 1897).

75. -------, "The University School." *University Record,* Vol. 1, No. 6 (November, 1896), pp. 417-419.

76. -------, *The Way Out of Educational Confusion.* Cambridge, Harvard University Press, 1931.

77. Dykhuizen, George, "An Early Chapter in the Life of John Dewey." *Journal of the History of Ideas,* Vol. 13 (October, 1952), pp. 563-572.

78. -------, "John Dewey and the University of Michigan." *Journal of the History of Ideas,* Vol. 23, No. 4 (October-December, 1962).

79. -------, "John Dewey at Hopkins (1882-1884)." *Journal of the History of Ideas,* Vol. 22, No. 1 (January-March, 1961), pp. 103-116.

80. *Elementary School Teachers' Reports (1899-1900).* Unpublished. Available in the archives of the University of Chicago Laboratory School.

81. Harper, William R., "Ideals of Educational Work." *Journal of the Proceedings and Addresses of the National Education Association*, 1895, pp. 987-998.

82. Hoblitt, Margaret, "Group VIII." *The Elementary School Record*, Vol. 1, No. 3 (April, 1900).

83. -------, "History: Group IX." *Elementary School Teachers' Reports*. Unpublished (January, 1900). In the archives of the University of Chicago Laboratory School.

84. -------, "Reading: Group IV." *Elementary School Teachers' Reports*. Unpublished (March, 1900). In the archives of the University of Chicago Laboratory School.

85. James, William, "The Chicago School." *Psychological Bulletin*, Vol. 1, No. 1 (January, 1904).

86. Mayhew, Katherine C., and Edwards, Anna C., *The Dewey School*. New York, D. Appleton-Century Company, 1936.

87. McCaul, Robert L., "Dewey and the University of Chicago." *School and Society*, Vol. 89, Part I (March 25, 1961), pp. 152-157: (April 18, 1961), pp. 179-183: (April 22, 1961), pp. 202-206.

88. Mead, George Herbert, *The Philosophies of Royce, James and Dewey in their American Setting*. Cambridge, Harvard University Press, 1930, pp. 75-105.

89. -------, "The Relation of Play to Education." *University Record*, Vol. 1, No. 8 (May, 1896), pp. 141-145.

90. *Publications of the National Herbart Society (1895-1900)*. First Yearbook, Charles A. McMurry, ed., Chicago, University of Chicago Press, 1908.

91. Rice, Joseph Mayer, *The Public-School System of the United States*. New York, The Century Company, 1893.

92. Runyon, Laura L., "A Day with the New Education." *The Chautauquan*, Vol. 30, No. 6 (March, 1900), pp. 589-592.

93. -------, *The Teaching of Elementary History in the Dewey School*, Unpublished M.A. Dissertation in History and Education, University of Chicago, 1906.

94. Small, Albion, "Some Demands of Sociology upon Pedagogy." *American Journal of Sociology*, Vol. 2, No. 6 (May, 1897), pp. 839-851.

95. Thomas, William Isaac, Source Book for Social Origins. Chicago, University of Chicago Press, 1909.

96. Tufts, James, "Extract from the Address by James Tufts." University Record, Vol. 27, No. 3 (July, 1931).

97. Van Liew, C. C., "The Educational Theory of the Culture Epochs." First Yearbook, National Herbart Society, 1895.

98. White, Morton G., The Origin of Dewey's Instrumentalism. New York, Columbia University Press, 1943.

99. -------, Social Thought in America: The Revolt Against Formalism. Boston, The Beacon Press, 1957.